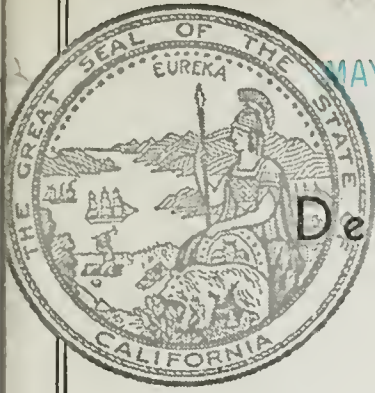




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State of California

THE RESOURCES AGENCY

Department of Water Resources

BULLETIN No. 65-62

QUALITY OF SURFACE WATERS IN CALIFORNIA 1962

APRIL 1965

HUGO FISHER
Administrator
The Resources Agency

EDMUND G. BROWN
Governor
State of California

WILLIAM E. WARNE
Director
Department of Water Resources

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DEPARTMENT OF WATER RESOURCES

BOX 388
SACRAMENTO



February 1, 1965

Honorable Edmund G. Brown, Governor,
and Members of the Legislature of
the State of California

State Water Quality Control Board

Gentlemen:

Bulletin No. 65-62, "Quality of Surface Waters in California, 1962", reports on a data collecting activity authorized by Section 229 of the Water Code and administered by the Department of Water Resources in cooperation with 19 federal, state, and local agencies. Information is presented for 234 stations located on 123 streams (including 6 major aqueducts and canals) and 4 lakes throughout the State.

The intense storms of early 1962 brought an end to the drought conditions experienced by the northern and central parts of the State during 1959-1961. Some temporary relief was also felt in parts of Southern California. The resulting higher flows reversed the trend toward increased seasonal deterioration in quality which was developing in the State's surface waters. For certain streams, notably the lower reaches of the San Joaquin River and some channels of the Sacramento-San Joaquin Delta, quality conditions during the drought were, from an irrigation standpoint, the poorest ever reported. However, by mid-February 1962, conditions had improved substantially and the quality at all stations in the lower San Joaquin Valley was the best since 1958.

In Southern California, the early rains brought a momentary respite from drought conditions resulting in improved quality conditions in a few streams along the coast. Inland, where the storms did not produce diluting runoff, quality conditions remained unchanged or continued to deteriorate.

The serious salinity problem in the Colorado River near the International Boundary continued unabated, causing concern among authorities in both the United States and Mexico. Fortunately, the quality of California's water supplies from the Colorado River is virtually unaffected by this problem.

Sincerely yours,

Director

State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES

EDMUND G. BROWN, Governor, State of California
HUGO FISHER, Administrator, The Resources Agency
WILLIAM E. WARNE, Director, Department of Water Resources
ALFRED R. GOLZE, Chief Engineer

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DIVISION OF RESOURCES PLANNING

Wesley E. Steiner Acting Division Engineer
Albert J. Dolcini Chief, Planning Management Branch

This report was prepared
by

Edwin A. Ritchie Water Resources Engineering Associates

The data were collected and compiled
under the supervision of

Glenn R. Peterson Associate Engineer Water Resources
Bay Area Branch
Arthur B. Myers Water Resources Engineering Associates
Delta Branch
H. Vernon Willshon Water Resources Engineering Associates
Northern Branch
Felix W. Cartier Water Resources Engineering Associates
Southern District
Tom E. Meredith Assistant Civil Engineer
San Joaquin Valley Branch

CALIFORNIA WATER COMMISSION

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- - - - 0 - - - -

WILLIAM M. CARAH
Executive Secretary

ORVILLE ABBOTT
Engineer

ACKNOWLEDGMENTS

The extensive coverage of the statewide surface water monitoring program is made possible through cooperation of federal, state, and local agencies. The helpful cooperation of the following agencies is gratefully acknowledged:

Federal Agencies

Department of the Army

Corps of Engineers

Department of the Interior

Bureau of Reclamation

Geological Survey

Department of Health, Education, and Welfare

Public Health Service

State Agencies

California Disaster Office, Radiological Service

Department of Fish and Game

Department of Public Health

Bureau of Sanitary Engineering

Division of Laboratories

State Water Quality Control Board

Other Public Agencies

Imperial Irrigation District

Kern County Land Company

Kings River Water Association

City of Long Beach, Department of Public Health

Other Public Agencies (continued)

City of Los Angeles

Department of Public Health

Department of Water and Power

Los Angeles County Flood Control District

Metropolitan Water District of Southern California, The

City of San Bernardino

City and County of San Francisco

Ventura County Water Resources Division

The Department of Water Resources wishes to especially thank the following federal agencies who granted permission for inclusion in this report of unpublished water quality data collected under various programs:

United States Department of the Interior

Bureau of Reclamation

Geological Survey

In addition, the United States Geological Survey performed a substantial portion of the analyses required by this program under a cooperative agreement with the Department of Water Resources. The bacteriological determinations were made by the California State Department of Public Health and the radiological determinations by the California Disaster Office under provisions of an agreement with the State Water Quality Control Board.

AUTHORIZATION

The activities of the Department's surface water quality program are authorized by Section 229 of the Water Code, which directs that:

"The department ... shall investigate conditions of the quality of all waters within the State, including saline waters, coastal and inland, as related to all sources of pollution of whatever nature and shall report thereon to the Legislature and to the appropriate regional water pollution control board annually, and may recommend any steps which might be taken to improve or protect the quality of such waters."

CHAPTER I. INTRODUCTION

It is axiomatic that a usable as well as abundant source of water is essential to the development of California. Accordingly, it is necessary that the quality of the State's surface water supplies be determined to complement the determination of quantity. In addition, to insure that California's rapidly expanding economy and increasing population are provided with a usable supply of surface water, the early detection and control of quality impairment is necessary.

As the importance of good quality water became more apparent to water users throughout the State, attempts to gather quality information increased. However, except for certain areas such as portions of the Central Valley and Southern California, much of the data is scattered as to location and of a discontinuous nature. Realizing the need for detailed information about the quality of the State's surface waters and for a comprehensive program of surveillance, the State of California began to systematically examine their quality early in 1951. Since that time, this program has been conducted by the Department of Water Resources in cooperation with a number of agencies and organizations.

This bulletin is the seventh in a chronological series of reports on surface water quality conditions in California. Data presented were collected by the Department of Water Resources and its cooperators. In addition to basic data, this bulletin contains evaluations and interpretations of significant variations in quality detected during 1962.

Because the quality of surface waters is subject to frequent and substantial change, the Department of Water Resources, as an aid to interested agencies and individuals, also publishes a monthly report on the subject. It is entitled "Quality of California Surface Waters in (Month, Year)". The monthly reports present current information for many of the locations described in this report plus a brief summary of significant changes in quality that have taken place between issues.

Prior Reports

Data for previous periods are included in the following publications.

California Department of Public Works, Division of Water Resources, Water Quality Investigations. "Quality of Surface Waters in California, 1951-1954." Report No. 15.

California Department of Water Resources, Division of Resources Planning. "Quality of Surface Waters in California, 1955-1956." Bulletin No. 65.

----. "Quality of Surface Waters in California, 1957." Bulletin No. 65-57.

----. "Quality of Surface Waters in California, 1958." Bulletin No. 65-58.

----. "Quality of Surface Waters in California, 1959, Part I, Northern and Central California." Bulletin No. 65-59.

----. "Quality of Surface Waters in California, 1959, Part II, Southern California." Bulletin No. 65-59.

----. "Quality of Surface Waters in California, 1960-1961, Volume I, Northern and Central California." Bulletin No. 65-61. (In two parts: (1) text, (2) basic data.)

----. "Quality of Surface Waters in California, 1960-1961, Volume II, Southern California." Bulletin No. 65-61.

Objectives

The objectives of this program are:

- (1) To determine the quality of the State's surface waters through a network of sampling stations representative of all significant streams and lakes in the State;
- (2) To detect changes in the quality of surface waters and alert control agencies when adverse changes are noted;
- (3) To determine trends in surface water quality;
- (4) To record and catalogue the data in a readily available form; and
- (5) To disseminate the data and information gathered to interested agencies as soon as practicable.

Scope of the Report

During 1962, water samples were collected and analyzed for 234 stations situated on 123 streams (including 6 major aqueducts and canals) and 4 lakes throughout the State. The location of these stations are shown on Plate 1. Included in the 234 stations are 22 stations maintained by the U. S. Bureau of Reclamation as a part of its program for operation of the Central Valley Project. In addition to the statewide network of sampling stations, the Department of Water Resources maintains in cooperation with the U. S. Bureau of Reclamation a network of stations in the Sacramento-San Joaquin Delta for the purpose of determining the encroachment of salinity from tidewaters into the Delta. Information gathered under this auxiliary program is also described in this report. Locations of stations in this network which, it is emphasized, is independent of the statewide network of stations are shown on Plate 2.

Chapter 2 contains a discussion of the mineral quality of surface waters as found throughout the State in 1962. Discussion is presented in successive order by water pollution control regions which are numbered and named substantially in accordance with the major surface drainage basins with which they are, in essence, co-terminous (see Plate 1). The nine water pollution control regions are:

- North Coastal Region (No. 1)
- San Francisco Bay Region (No. 2)
- Central Coastal Region (No. 3)
- Los Angeles Region (No. 4)
- Central Valley Region (No. 5)
- Lahontan Region (No. 6)
- Colorado River Basin Region (No. 7)
- Santa Ana Region (No. 8)
- San Diego Region (No. 9)

For convenience in presentation, the Central Valley Region (No. 5) has been divided into four separate areas as follows: 5a, which encompasses the Sacramento Valley and its tributary watershed; 5b, the San Joaquin Valley; 5c, the Sacramento-San Joaquin Delta; and 5d, the Tulare Lake Basin (the southern one-half of the San Joaquin Valley).

Chapter 3 contains a discussion of quality characteristics of the State's surface waters other than those described by the concentrations of the common mineral salts as found in 1962. Included are presentations pertaining to arsenic, detergents (ABS), the minor constituents (heavy metals), dissolved oxygen, bacteriological quality, and radioactivity.

Appendix A describes the procedures employed under the program and presents a discussion of the criteria utilized in evaluating the quality of water relative to existing or anticipated beneficial uses.

Appendix B contains the data collected under the program. The tabular data are segregated according to location within a particular water pollution control region and also according to the type of data. At the forefront of Appendix B is an index to the tabular data. In addition to listing the pages on which tabular data may be found, the index contains information pertaining to the location, period of record, frequency of sampling, and the collecting agency for each station. This index should also be used in identifying the station locations shown on Plate 1.

CHAPTER II. MINERAL QUALITY

The basic quality characteristics of all waters are those imparted by the kinds and amounts of minerals with which they come in contact as they proceed through the hydrologic cycle. These characteristics can be altered substantially and made even more complex by the water-associated activities of man. The concentration and chemical composition of dissolved minerals at any one time and for any particular water are categorized as its mineral quality. The concentration of chemical constituents and combinations of constituents in water vary considerably. Likewise, their effect on the beneficial uses of water is quite variable. With respect to surface waters, this variation in mineral quality is constantly changing, at times only slightly while at other times quite radically depending on the factors which influence the flow of water at a particular location. Accordingly, these characteristics are repeatedly examined through the process of sampling, laboratory analyses, and evaluation to determine whether or not they have changed, what the magnitude of change is, its probable cause, whether or not there is a definite pattern or trend attached to such changes, and what effect this may have on the beneficial use of the particular water in question.

This chapter describes the general mineral character of California's surface waters and discusses the significant changes in mineral quality which occurred during 1962.

North Coastal Region (No. 1)

Thirty-two stations were maintained on 19 streams in this region in 1962. Waters of streams in the northern portion of the

region are predominantly calcium-magnesium bicarbonate, while the remaining streams are generally calcium bicarbonate in character. Boron is present in significant but generally tolerable quantities in certain streams, notably the Shasta, Russian, and Upper Eel Rivers. In general, the mineral quality of streams in this region is excellent for all but the most exacting requirements.

During 1962, there were few significant changes in the mineral quality of streams in the North Coastal Region. In May 1962, a maximum value of record for the concentration of phosphates of 1.6 ppm was reported for station 3, Klamath River near Klamath. The concentration of boron in waters of Outlet Creek near Longvale (station 5b), tributary to the Eel River, near Dos Rios, exceeded 0.5 ppm throughout the summer of 1962. The maximum concentration for the year, 3.1 ppm in September, is the second highest value for boron reported at this station. The maximum value of record, 4.2 ppm, was reported in September 1961.

San Francisco Bay Region (No. 2)

There were five quality stations maintained on as many streams in this region during 1962. In addition to those streams directly tributary to San Francisco Bay, data for two stations, maintained by the U. S. Bureau of Reclamation to observe changes in the quality of the Sacramento River in its final tidal reach, are included only as a matter of information since they fall within the boundaries of the region. Discussion of the variation of quality in the tidal reaches of the river system will be found in the subsequent section of this report under the heading "Central Valley Region (No. 5) - Sacramento-San Joaquin Delta (subregion 5c)".

Waters of principal streams tributary to San Francisco Bay are bicarbonate in type with calcium generally the predominant cation. Mineral concentrations (total dissolved solids) range from 100 to 550 ppm for the Napa River and Coyote and Los Gatos Creeks, and from 150 ppm to as high as 1,100 ppm for Arroyo Del Valle and 900 ppm for Alameda Creek. Boron frequently exceeds 0.5 ppm in the Napa River, Arroyo Del Valle, and Alameda Creek. Waters of the latter streams normally range from moderately hard to very hard. Occasionally the other streams in the region carry water which is considered very hard.

After having been dry since early summer 1961, flow resumed early in 1962 at stations 73, Alameda Creek near Niles; 71, Arroyo Del Valle at Veterans Hospital; and 82, Coyote Creek near Madrone. In January 1962, waters of Alameda Creek at Niles had a specific conductance of 1,470 micromhos (approximately 900 ppm, total dissolved solids), the second highest value for total mineral concentration recorded at this station. The boron concentration was 1.0 ppm. In February 1962, the boron concentration for waters of Arroyo Del Valle was reported at 2.9 ppm, somewhat less than the maximum concentration of 3.3 ppm reported a year earlier. Boron concentration in both these streams decreased in succeeding months remaining near the 0.5 ppm level in Alameda Creek but rising to near the 1.0 ppm level in Arroyo Del Valle.

A minimum value of record for specific conductance of 195 micromhos (about 120 ppm, total dissolved solids) was reported for Los Gatos Creek at Los Gatos (station 74) in November 1962.

Central Coastal Region (No. 3)

Fourteen stations on 11 streams were in operation in this region during 1962. The widespread rains early in the year caused flow to resume at several stations, some of which had been reported as dry for many months. In March 1962, streamflow was reported at station 44a, Cuyama River near Garey (dry since May 1960), and station 43a, Salinas River at Paso Robles (dry since June 1960).

Streams of the northern portion of this region (San Lorenzo and Carmel Rivers and Soquel and Uvas Creeks) are calcium bicarbonate in character. Waters of Soquel Creek are very hard. Mineral concentrations in the Pajaro River at Chittenden (station 77) vary substantially with considerably higher concentrations and changing characteristics at low flows. Boron at this station generally exceeds 0.5 ppm, ranging as high as 2.0 ppm, and the waters are frequently very hard. The high mineral concentrations in the Pajaro River at this location can be attributed to its major tributary, the San Benito River. Waters of the San Benito River are magnesium-sodium bicarbonate-sulfate in high concentration (total dissolved solids are usually in excess of 1,200 ppm). Boron is seldom less than 1.5 ppm and the waters are very hard with values for total hardness reported as high as 702 ppm.

Waters of the Salinas River and its tributaries, the major stream system in the Central Coastal Region, are calcium bicarbonate with concentrations of total dissolved solids generally below 500 ppm except at the uppermost station, Salinas River at Paso Robles (43a), where the concentration has been as high as 1,280 ppm.

They range from moderately hard to very hard. The mineral quality at the lowermost station on this stream system, Salinas River near Spreckels (station 43), is at times strongly influenced by the effluent from Alisal Sanitary District Sewage Treatment Plant which is discharged to the river upstream from the sampling point. Consequently concentrations of various minerals at this station are higher than those found in the natural flow.

Streams in the southern portion of the region are calcium-magnesium sulfate (Cuyama River) or calcium-magnesium sulfate-bicarbonate (Santa Ynez River) in character and the waters are very hard. Waters of the Cuyama River near Garey (station 44a) are extremely hard with values for total hardness ranging from 451 to 990 ppm. Total dissolved solids concentrations at this station are the highest for any location in this region and range from 875 to 1,760 ppm.

The most significant changes in surface water quality for the Central Coastal Region during 1962 took place in response to the resumption of flow at several locations. The quality of water flowing in the Salinas River at Paso Robles (station 43a) was considerably better than that found at this location during the period of flow recorded in 1960. Flow lasted three months (March, April, and May) in 1962 and the concentration of total dissolved solids ranged from 424 to 650 ppm. During the period of flow in 1960 (February through June), total dissolved solids at this station ranged from 338 to 886 ppm but was above the 700 ppm level for all months except February. Minimum values of record for concentrations of total hardness (451 ppm) and total dissolved solids (875 ppm)

were reported for waters of the Cuyama River near Garey (station 44a in May 1962. As pointed out earlier in this section, there had been no flow at these two stations since spring 1960.

The trend toward increased mineral concentration in the Pajaro River at Chittenden (station 77) which developed during the dry years of 1960 and 1961 receded for only a short time. This was during the period of heavy runoff that occurred in March, April, and May 1962. Values for specific conductance varied between 1,830 and 2,170 micromhos throughout the remaining months of the year with the higher values approaching the maximum value of record (2,200 micromhos) reported in November 1954. The previous maximum value for chloride concentration (374 ppm) at this station was exceeded three times in 1962 and a new maximum of record of 382 ppm was established in January 1962. Likewise the concentration of boron exceeded the previous maximum of record (2.0 ppm) three times and a new maximum of 2.4 ppm was established. It is interesting to note that mineral concentrations in waters of the San Benito River, the Pajaro River's principal tributary, while substantial, were generally slightly lower than those of the previous year. However, new maximums of record for chloride concentration (260 ppm) and total hardness (715 ppm) were established for the sampling station (station 77a, San Benito River near Bear Valley Fire Station).

Los Angeles Region (No. 4)

During 1962, data pertaining to the quality of surface waters in this region were collected at 15 stations located on 12 water sources. Included are stations near the termini of the

Colorado River Aqueduct and the Los Angeles Aqueduct. The latter conveys water from the Owens River Basin located in the Lahontan Region (No. 6) to the Los Angeles area. These aqueducts are the principal sources of surface water supplies for the metropolitan area of Southern California.

The quality of surface waters in the Los Angeles Region varies considerably from stream to stream and at any particular location may be strongly influenced by imported water and the multiple use, including the disposal of waste water, to which these waters are put. Quality conditions in the various stream systems are discussed in the following paragraphs beginning at the western end of the region and moving east and south to the eastern boundary.

Ventura River System

Waters of the Ventura River and its principal tributary, Matilija Creek, are calcium sulfate-bicarbonate in character and very hard. Total dissolved solids range from 200 to 1,200 ppm in the Ventura River and from 400 to 1,700 ppm in Matilija Creek. During periods of low flow, the concentration of boron in Matilija Creek exceeds 1.0 ppm. A trend toward increased mineral concentration in Matilija Creek developed after the period of heavy runoff recorded in the spring of 1958, reaching a maximum in December 1961. This trend was reversed in 1962 in response to the dilution afforded by heavy amounts of precipitation that occurred.

Santa Clara River System

In the Santa Clara River Valley of Ventura County, waters of the Santa Clara River and its tributaries are calcium-sodium

sulfate in character and are extremely hard. Except for Santa Paula Creek, values for boron are usually in excess of 0.5 ppm and frequently higher than 1.0 ppm. Concentrations of sulfate are often extremely high and seldom fall below 250 ppm, the upper limit for sulfate concentration recommended in the U. S. Public Health Service Drinking Water Standards. At the uppermost station on this system, Santa Clara River near Los Angeles-Ventura County Line (station 46) sulfate has been reported as high as 3,368 ppm, and at the lowermost station, Santa Clara River near Santa Paula (station 46a), as high as 971 ppm.

In March 1962, heavy rains produced a runoff sufficient enough to dilute the mineral concentrations at station 46, Santa Clara River near Los Angeles-Ventura County Line, such that minimum values of record for total dissolved solids (484 ppm), total hardness (270 ppm), and sulfate concentration (214 ppm) were produced at this station. Likewise at station 46c, Piru Creek near Piru, minimum values of record for total dissolved solids (545 ppm), total hardness (328 ppm), and sulfate (254 ppm) were reported. While mineral concentrations were lower in 1962 than in 1961 at the other stations in the watershed, no dramatic changes in quality similar to those described above were recorded.

Los Angeles River System

The lower reaches of the Los Angeles River serve as a drainage facility for the conveyance of industrial waste water and storm runoff through the Los Angeles metropolitan area. Consequently the quality of water flowing in the channel is extremely

variable. During periods of high runoff, mineral concentrations are low; however, during most of the year when there is little natural runoff, concentrations are high. At station 47, Los Angeles River at Los Angeles, the water is usually sodium sulfate-chloride in character and very hard. At station 48, Los Angeles River at Long Beach, situated near where the stream enters the Pacific Ocean, the water is usually of such poor quality that it is unusable for any recognized beneficial use. This is because the flow consists almost entirely of highly concentrated, often toxic, waste water. Since the station is in the tidal reach of the river, analyses at times indicate the presence of sea water.

San Gabriel River System

Included in this system is the Rio Hondo, a bifurcation of the San Gabriel River.

Native water in the San Gabriel River system is calcium bicarbonate in character with total dissolved solids between 190 and 350 ppm, and moderately hard to very hard. At times Colorado River water is released to the system above Whittier Narrows and the mixture used to artificially recharge ground water by spreading in the channels of the San Gabriel River and Rio Hondo. Consequently at the downstream stations, the water at these times takes on the chemical characteristics of the imported water, becoming calcium-sodium sulfate water. Total dissolved solids are on the order of 700 ppm and total hardness increases to around 350 ppm.

The Los Angeles and Colorado River Aqueducts

As stated earlier, these conveyance facilities constitute the major source of surface water supply for the metropolitan area

in the region, and (so far as the Colorado Aqueduct is concerned) in the neighboring regions to the south, the Santa Ana (No. 8) and San Diego (No. 9) Regions.

Water from the Los Angeles Aqueduct (which comes from the Owens River Basin) is sodium-calcium bicarbonate in character, soft and of excellent mineral quality. Total dissolved solids vary little, ranging from 159 to 259 ppm.

Water from the Colorado River Aqueduct is calcium-sodium sulfate in character with total dissolved solids ranging from 597 to 830 ppm. It is very hard, total hardness ranging between 300 and 400 ppm.

As is to be expected, there is little fluctuation in mineral concentration in the waters of the two aqueducts throughout the year. During 1962, mineral concentrations in waters of the Los Angeles Aqueduct were generally lower than those reported in 1961. In contrast, mineral concentrations in waters of Colorado River Aqueduct continued to increase. The increased concentration developed after a period of minimum concentration recorded during the last half of 1958 and throughout 1959. However, the concentrations were below the maximum values reported in 1956 and 1957.

Central Valley Region (No. 5)

As stated in the previous chapter, because the Central Valley is so extensive it has been divided into four separate areas for the purposes of this report. They are: 5a, the Sacramento River Valley and its tributary watershed; 5b, the San Joaquin River Valley; 5c, the Sacramento-San Joaquin Delta; and 5d, the Tulare Lake Basin.

Sacramento River Valley Subregion (5a)

Included in this discussion are the waters of the major tributaries of the Sacramento River: the Pit, Feather, Yuba, and American Rivers, and 18 other significant tributaries. During 1962, there were 52 stations in operation in this subregion.

Waters of streams tributary to the Sacramento River above Shasta Dam are primarily calcium bicarbonate in character, soft, and of low mineral concentration. Streams tributary between Keswick and Red Bluff are similar in quality but somewhat harder. Eastside tributaries between Red Bluff and Chico are bicarbonate with no predominant cation, soft, and of low mineral concentration. Waters of the Feather and Bear Rivers are calcium-magnesium bicarbonate while those of the Yuba and American Rivers are calcium bicarbonate. Except for the Bear River, whose waters are at times moderately hard, waters of all four streams are soft and mineral concentrations are quite low.

The quality of water in west side tributaries south of Red Bluff varies substantially from those on the east side of the valley and those above Red Bluff. Mineral concentrations are somewhat higher, the waters range from moderately hard to very hard, and boron is present in significant concentrations. Waters of Red Bank, Elder, Thomes, and Stony Creeks are calcium, or calcium-magnesium, bicarbonate in character while those of Clear Lake-Cache Creek are magnesium-calcium bicarbonate in character. In Putah Creek, the most southerly stream, the waters are magnesium-bicarbonate. High concentrations of boron are consistently reported for Cache Creek. At station 80, Cache Creek near Capay, the boron

concentration generally exceeds 0.5 ppm and frequently is greater than 1.0 ppm. At station 79, North Fork Cache Creek near Lower Lake, boron exceeds 2.0 ppm except during periods of excessive runoff in winter. In the past, boron concentration in waters of Putah Creek near Winters (station 81) frequently exceeded 0.5 ppm. However, since Monticello Dam was constructed and the reservoir placed in operation, the level of concentration has been consistently below 0.5 ppm.

During 1962, there were few significant changes in the quality of water in streams tributary to the Sacramento Valley. A maximum value of record for boron concentration (0.8 ppm) was established for waters of Stony Creek near Hamilton City (station 13a). A minimum value of record for boron (0.1 ppm) was established at station 41, Clear Lake at Lakeport, in October. The level of boron in Cache Creek rose to peaks of 5.4 ppm at station 79, North Fork near Lower Lake, and 3.1 ppm at station 80, near Capay. However, these values were below the maximums of record reported for these stations.

The mineral quality of water in the Sacramento River, as would be expected, varies depending on the degree of influence imposed upon it by the more concentrated drainage waters, sewage and industrial wastes, and effluent ground waters which tend to degrade it, and by the less concentrated flows of the tributary streams which tend to "sweeten" it. Below Shasta Dam, it is calcium bicarbonate in character and soft, with total dissolved solids ranging from 67 to 102 ppm. At the Freeport station, well below the city of Sacramento and the American River, the last tributary before the

Delta, it is still bicarbonate in character and soft. However, the major cations, calcium, magnesium, and sodium, are nearly equal in concentration and total dissolved solids range from 68 to 169 ppm. The quality of the Sacramento River is excellent throughout its length. In February 1962, a maximum value of record for specific conductance of 143 micromhos was established at Keswick (station 12). However, this is a matter of record only and has little practical significance.

The quality of drainage water entering the Sacramento River from the valley floor is measured at two locations, each on a major tributary drain. Water from the Colusa Trough is sodium-magnesium bicarbonate, soft to very hard, with values for total dissolved solids reported as high as 900 ppm. Waters of Sacramento Slough are bicarbonate in character, soft to moderately hard, with total dissolved solids ranging up to 440 ppm.

San Joaquin River Valley Subregion (5b)

This subregion encompasses the entire northern one-half of the San Joaquin Valley. Surface drainage is to the San Joaquin River. In 1962, there were 20 stations in operation in the area under this program. Additional data were obtained at five stations operated by the U. S. Bureau of Reclamation. Two new stations, San Joaquin River at Crows Landing Bridge (26b) and San Joaquin River at Patterson Bridge (27a), were added to the network in January. These stations were established to more adequately determine the quality of water in the lower reaches of the San Joaquin River where, at times, it has been critical. Sampling at both stations will

provide data representative of the quality in a relatively long reach of the stream. Historical data collected by the Department of Water Resources and the U. S. Bureau of Reclamation are available for these locations.

Waters of the major east side streams above the valley floor -- the San Joaquin, Fresno, Chowchilla, Merced, Tuolumne, and Stanislaus Rivers -- are generally calcium bicarbonate in character and soft, with low mineral concentrations. Highest mineral concentrations for this group have been reported at station 114, Chowchilla River at Buchanan Dam site (the maximum value of record for total dissolved solids is 481 ppm).

As they move across the valley floor, waters of the east side streams increase in mineral concentration. The degree of increase varies with the particular stream, depending on the factors which tend to bring about the increase. The stream which experiences the greatest increase in mineral concentration is the Tuolumne River. At the upstream station, below Don Pedro Dam (31a), the waters are as described above with a total dissolved solids concentration of 117 ppm being the maximum. At the next station, Hickman Waterford Bridge (30), the waters vary in character from calcium-sodium-magnesium bicarbonate at moderate flows to sodium chloride at low flows. Overflow of saline water from abandoned and partially used gas wells, located along the reach of the river between the two stations, contributes substantially to the degradation in the quality in the stream, particularly at low flows. The chloride concentration increases about tenfold when the discharge is low. During the past three years, the range in chloride concentration has

varied approximately between 10 and 120 ppm. At the lowermost station, Tuolumne City (31), located a few miles upstream from the confluence with the San Joaquin River, mineral concentrations at the lower flows are approximately double those at the Hickman-Waterford Bridge station. Surface drainage, effluent ground water, sewage, and waste from additional gas wells contribute to the increased concentration and the waters become sodium chloride in character. Total dissolved solids at this station have ranged from 34 ppm to as high as 686 ppm and the chloride concentration from 7 to 298 ppm. The trend toward increased mineral concentration in the Tuolumne River at the two valley floor stations which began in 1959 was reversed in 1962, and mineral concentrations, especially at the Tuolumne City station, were substantially lower than in the previous three years.

Large quantities of water are imported to the San Joaquin Valley from the Sacramento-San Joaquin Delta via the Delta-Mendota Canal. At its terminous near Mendota (station 92), the water in the canal is sodium chloride-bicarbonate in character, and soft to hard with moderate concentrations of dissolved solids. The water, of course, generally varies in quality in response to the changes in quality which take place at the intake in the Sacramento-San Joaquin Delta, near Tracy.

The quality of water in the main stem of the San Joaquin River between Mendota and the Delta is influenced by many factors. Accordingly, there is considerable variation in quality throughout its length. At Mendota (station 25), most of the water is imported water delivered via the Delta Mendota Canal. Consequently the

quality of water at this station is not necessarily representative of the natural quality of water in the San Joaquin River and there is no consistent predominance of a specific cation or anion. The principal cations are sodium and calcium and the dominant anions are bicarbonate and chloride. Total dissolved solids have ranged from 18 ppm (when the San Joaquin River was in flood) to 753 ppm.

During the irrigation season, all of the flow between Mercedota and a point opposite the city of Dos Palos is diverted. Consequently water at the next sampling station, Fremont Ford Bridge (25c), some 50 miles downstream from Dos Palos, consists entirely of return water accumulating an unspecified distance above the station and from Salt Slough, the major natural drain for a large area in western Merced County. At this point, waters of the San Joaquin River contain the highest concentrations of salts to be found anywhere throughout its length. They vary in character from sodium chloride to sodium-calcium chloride-sulfate. Total dissolved solids have ranged from 67 ppm (flood stage) to 3,350 ppm. Except during flood flows, the waters are extremely hard (maximum reported value for total hardness is 1,240 ppm) and chlorides and sulfates are present in concentrations frequently in excess of 250 ppm. Generally, the quality of these waters is poor and occasionally it has been degraded to the point of being unusable.

In general, the quality of water in the San Joaquin River improves at each successive downstream station. This is brought about by the dilution afforded by the major tributaries -- the Merced, Tuolumne, and Stanislaus Rivers -- as well as spillage from the irrigation canal systems operated by the larger irrigation

districts which obtain their supply principally from the tributaries. However, there is a tendency for the mineral concentrations to increase in the relatively long reach between the Merced and Tuolumne Rivers. This is due to the fact that drainage water, other waste waters, and effluent ground water infringe heavily on the dilution gained from the Merced River. As a result, a secondary peak in concentration on the San Joaquin River far less severe than that at Fremont Ford Bridge occurs in the vicinity of the Grayson station (26) located a short distance above the confluence with the Tuolumne River. At times this peak in concentration is found further upstream at the Patterson Bridge (27a) or Crows Landing Bridge (26b) stations. Total dissolved solids at the Grayson station have ranged from 54 ppm (flood flow) to 1,140 ppm, and the water varies in character from calcium bicarbonate to sodium chloride.

The lowermost station, San Joaquin River near Vernalis (27), marks the downstream end of the San Joaquin River Valley and the beginning of the Sacramento-San Joaquin Delta. All surface water flow from the valley passes this point and at the same time it is above the influence of tidal action. It is, therefore, one of the key stations in the network operated under this program. The water at station 27 is generally sodium chloride to sodium chloride-bicarbonate in character, moderately hard to hard (soft during high stages of flow) with total dissolved solids ranging from 52 (at high stages) to 1,220 ppm. As at all other stations in the lower reaches (between Fremont Ford Bridge and the Delta) of the San Joaquin River, mineral concentrations at times attain a level considered critical for irrigation, the river's prime use.

The trend toward increasing mineral concentration in water of the San Joaquin River which developed during the dry years 1959, 1960, and 1961, was abruptly reversed by the heavy rains of February and March 1962 and successively improved by increased runoff in the Merced and Stanislaus Rivers during June 1962 which resulted from the first substantial snowmelt since 1958. In December 1962, mineral concentrations at the Fremont Ford station (25c) jumped abruptly upward and exceeded the concentrations reported in the three previous years. Specific conductance was reported at 3,840 micromhos and the chloride concentration was 885 ppm. These values, however, did not exceed the maximum values of record of 5,410 micromhos and 1,330 ppm recorded in late October 1955.

Sacramento-San Joaquin Delta Subregion (5c)

This subregion contains the central portion of the Central Valley and is the focal point for all waters draining toward the Pacific Ocean from the Sacramento and San Joaquin Valleys. Included is the Sacramento-San Joaquin Delta, which extends west to Suisun Bay, and the watersheds of the Cosumnes, Mokelumne, and Calaveras Rivers which are tributary to the Delta from the east. In 1962, there were 23 stations in the area, 17 in the Delta, and 6 on the eastern tributary streams. Additional data for the Delta are collected at 11 stations operated by the U. S. Bureau of Reclamation.

Waters of the eastern tributaries are calcium bicarbonate in character and soft, with low concentrations of dissolved minerals.

The quality of water in the Sacramento-San Joaquin Delta is quite variable and is influenced primarily by five important

factors. These are: (1) the tidal motivated incursion of saline water from Suisun Bay into the Delta, (2) flow and quality conditions in streams tributary to the Delta, (3) diversions to, and return flows from, the many irrigated islands in the Delta, (4) export of water from the Delta, and (5) ground water accretions in the Delta.

In the northern portion of the Delta, the waters are representative of the Sacramento River and are bicarbonate in character with the major cations about equal in proportion to one another. They are generally soft with low mineral concentrations. Waters of the middle portion of the Delta vary in chemical composition grading from the bicarbonate type described for the northern portion to the sodium chloride characteristic common to the southern portion. They range from soft to hard and have moderate concentrations of dissolved minerals. At the western edge of the middle-Delta, at station 28, San Joaquin River at Antioch, the quality of water undergoes extreme variation because it is affected by sea water from Suisun Bay under certain conditions. When flows are insufficient to repel sea water incursion, the water at this station assumes the sodium chloride character of ocean water and is therefore unsuitable for municipal and industrial use and is restricted as a source of irrigation water. In winter and spring when streamflow increases, the water is usually an excellent sodium bicarbonate water.

Waters of the southern and southwestern portions of the Delta are sodium chloride in character, soft to hard, with maximum values for total hardness at eight stations ranging from 248 to 356 ppm. Total dissolved solids at these same stations vary, at

the maximum, from 609 to 914 ppm. Boron, especially along the western perimeter, is an important characteristic of these waters and maximum concentrations reported exceed 0.5 ppm at all stations. Mineral concentrations at one station in particular are significantly higher than concentrations at the other seven stations. This is station 107, Indian Slough near Brentwood, where maximum reported values for certain concentrations are: total dissolved solids, 1,237 ppm; total hardness, 570 ppm; and boron, 4.9 ppm. These higher values can be attributed to the influx of highly concentrated ground waters to this channel and to increased mineral concentrations resulting from the fact that there is little opportunity for a complete turnover or flushing out of the water in the channel.

The trend toward deterioration in quality of the waters in the southern one-half of the Delta and near Stockton, which accompanied the dry years 1959, 1960, and 1961, continued into 1962 reaching a peak at most locations in mid-January and at other stations in mid-February. Maximum values of record for specific conductance (a measure of total salt concentration) and total hardness were reported for six stations (seven stations for hardness) and near maximum values were reported for the remaining five stations. Following is a tabulation of the values reported together with an estimated value for total dissolved solids. At stations 107 and 108, the maximums occurred in February and, in addition, new maximum values for boron concentration of 0.8 and 1.9 ppm, respectively, were reported at these stations.

MAXIMUM VALUES IN 1962
FOR SPECIFIC CONDUCTANCE AND TOTAL HARDNESS
AT STATIONS IN THE SACRAMENTO-SAN JOAQUIN DELTA

Station	: Specific : Conductance : (micromhos)	: Estimated value : : for total dis- : solved solids : (ppm)	: Total : Hardness : (ppm)
Delta Mendota Canal near Tracy (93)	1,440*	811	344*
Stockton Ship Channel at Rindge Island (100)	944*	525	210*
San Joaquin River at Garwood Bridge (101)	1,270*	719	286*
San Joaquin River at Mossdale Bridge (102)	1,270	719	280
Old River near Tracy (103)	1,360	756	326
Grant Line Canal at Tracy Road Bridge (103a)	1,270	698	292
Old River at Clifton Court Ferry (104)	1,330*	757	307*
Italian Slough near Mouth (106)	1,610*	919	348*
Indian Slough near Brentwood (107)	1,350	752	288
Old River at Orwood Bridge (108)	1,390*	781	334*
Rock Slough near Knightsen (109)	1,090	627	302*

* New maximum of record.

Salinity in the Sacramento-San Joaquin Delta

The intrusion of saline water from the San Francisco Bay complex into the channels of the Delta from which water is diverted for irrigation has been a significant problem for many years. To maintain surveillance of the encroachment of saline water into the Delta and to determine its extent, there is, in addition to the network of stations already described in this report, a network of salinity observation stations located in San Francisco, San Pablo, and Suisun Bays and throughout the Delta.

Data have been collected from this network of stations continuously since 1924 except during the period 1941-1943 when miscellaneous series of samples were collected. Beginning in 1944 the network has been maintained under a cooperative agreement with the U. S. Bureau of Reclamation. Samples are collected, when possible, at four-day intervals, one and one-half hours after high-tide and analyzed for the concentration of the chloride ion. (Chloride is selected because it is the major constituent of sea water and because its analytical determination is quite simple.) Results are issued monthly to all interested agencies and individuals in the Delta area to keep them advised of prevailing conditions. They also serve as an aid to the U. S. Bureau of Reclamation in determining releases from its Central Valley Project reservoirs.

The data presented in this bulletin were collected at 26 stations for the water year October 1, 1961 -- September 30, 1962. Data for prior years are published in Department of Water Resources Bulletin No. 23 series entitled "Surface Water Flow for (year)".

The records for the 1962 water year are listed in tabular form in Appendix B. Also included is a description of the location of the various stations and a tabulation of the maximum observed salinity at them during 12 selected years. The location of the sampling stations and a delineation of the maximum seasonal encroachment of salinity in the Delta of water having 1,000 parts of chloride per million parts of water for these same 12 years are shown on Plate 2. The line for 1938 depicts encroachment during a year when runoff was far above normal prior to operation of the Central Valley Project. Those for 1952, 1956, and 1958 show the limits of encroachment in years when runoff was far above normal since operation of the Central Valley Project began. The line for 1944 typifies the years just preceding the Project. Lines for 1931 and 1939 demonstrate the limits of encroachment in two years when runoff was well below normal prior to the Project. The year 1955 was a water year of subnormal runoff occurring since the Project was placed in operation. The years 1959, 1960, and 1961 are the three most recent (also "dry") years; and 1962 is, of course, the current year. As will be noted, the limit of encroachment in 1962 was considerably west or downstream of the limits for the three previous years.

Tulare Lake Basin Subregion (5d)

In the Tulare Lake Basin, the principal streams included in the network are (from north to south) the Kings, Kaweah, Tule, and Kern Rivers. All are tributary to the San Joaquin Valley from the east side. West side tributaries, and those stemming from the

Tehachapi Mountains at the south end of the valley, contain water only when precipitation is very heavy and consequently are not included in the program. During 1962, there were nine stations in operation.

Waters of the four streams mentioned are generally calcium bicarbonate in character with low concentrations of total dissolved solids. The Kings and Kaweah Rivers produce water which is soft, while that produced by the Tule and Kern Rivers ranges from soft to moderately hard. Total dissolved solids in the Tule and Kern Rivers are also somewhat higher than that of the Kings and Kaweah Rivers with values up to 328 ppm for the Tule River and 257 ppm for the Kern River.

In 1962, the trend toward increased mineral concentration which developed after 1958 in waters of the Kern River was reversed and mineral concentrations were substantially lower than in 1961. However, while peak values at two of the three stations on the Kern River occurred late in 1961, the peak values for station 36a, Kern River below Isabella Dam, were not recorded until January-February 1962. It is possible that this lag in maxima is due to a delay in the release of flow from reservoir storage. The value for specific conductance reported for this station in February (411 micromhos) was a new maximum value of record.

Lahontan Region (No. 6)

The Lahontan Region, which comprises that area situated between the California-Nevada border and the Sierra Nevada Mountains and extends from the Oregon border on the north to the southern

boundary of the Mojave River Basin, contains 12 surface water quality sampling stations located on five streams. These streams are (from north to south) the Susan, Truckee (including Lake Tahoe), Carson, Walker, and Mojave Rivers.

Waters of the Susan, Truckee, Carson, and Walker Rivers are calcium bicarbonate in character, of low mineral concentration, and soft. Total dissolved solids in the Susan River at Susanville (station 17b) range from 40 to 370 ppm. In the other streams, values for total dissolved solids are lower yet. At Lake Tahoe, the range is from 45 to 95 ppm. In April 1962, maximum values for total dissolved solids (286 ppm) and boron concentration (0.5 ppm) were reported for station 116a, Walker River, East near Bridgeport. However, it should be noted that since the magnitude of these concentrations is so low, the fact that they are maximum values of record is of little consequence.

The Mojave River, located at the southern end of the region, is sodium-calcium bicarbonate in character, soft to moderately hard, with concentrations of total dissolved solids ranging up to almost 400 ppm. In March 1962, a new maximum value for total dissolved solids (315 ppm) was reported for the uppermost station, Mojave River near Victorville, (station 67).

Colorado River Basin Region (No. 7)

Fourteen stations on four streams and one lake are maintained in the Colorado River Basin Region to monitor surface water quality. The sources of water and the number of stations on each source are as follows: Colorado River (7), Whitewater River (2),

New River (2), Alamo River (2), and Salton Sea (1). The Colorado River stations, except for station 56d, Colorado River at Colorado River Aqueduct Intake (Lake Havasu), are visited twice each year while the remaining stations in the region are visited bimonthly on the odd-numbered month. Station 56d is sampled monthly. Additional data for other stations on the Colorado River are collected and published by the U. S. Public Health Service.

Since the Colorado River is the primary source of water supply in this region, the quality of water in the Alamo, New, and Whitewater Rivers (except in its upper reaches) and the Salton Sea is strongly influenced by the quality of the water diverted from the Colorado River. Accordingly, quality conditions in the various streams are discussed in parallel with the flow and distribution of water in the region beginning with the uppermost station on the Colorado River in California and ending at the Salton Sea, the natural terminous for much of the water draining the area of use in California.

Colorado River

The Colorado River is a regulated stream; consequently, for the most part, variations in the mineral quality of the waters have been much less erratic in comparison to the variations reported for many other streams. However, in recent years, a marked change in quality has taken place in the lowermost reach of the river and this will be discussed in a later paragraph.

Waters of the Colorado River are sodium-calcium sulfate in character and very hard. Mineral concentrations show a definite

pattern of increase between the uppermost and lowermost of the seven stations in operation. Prior to the marked change in quality at the lower stations, values for total dissolved solids ranged from 588 to 858 ppm at the near Topock (54) station to between 707 and 1,090 ppm at the below Morelos Dam (56b) station. Total hardness in the stream has varied between 250 and 462 ppm and sulfate concentration between 246 and 404 ppm for the seven stations. During 1962, data collected indicate that the trend toward increased mineral concentration, which developed following the higher than usual flows of 1958, continued. However, the 1962 values were lower than those reported during the period 1955-1957 when maximum concentrations were found.

Beginning in 1961, mineral concentrations considerably in excess of those reported earlier have been found at the two lowermost stations on the Colorado River, station 56, at Yuma, Arizona, and station 56b, below Morelos Dam. Up to this time, maximum values for total dissolved solids for these stations had been 1,050 and 1,090 ppm, respectively; however, since then, values have ranged from 2,343 to 3,664 ppm at the Yuma station and from 1,510 to 2,082 ppm at the Morelos Dam station. Similarly, the concentrations of the individual constituents are much larger. The chloride concentrations, in particular, have increased considerably, and at the Yuma station are five times higher than the previously reported maximum value (176 ppm). In addition, the waters have changed in chemical character to where they are now sodium chloride waters. These increases are due to large amounts of highly mineralized irrigation drainage water from the Wellton-Mohawk Project, which enters

the Colorado River upstream from Yuma, Arizona. In 1962, maximum values of record for most of the major mineral constituents were established at these stations. By way of illustration, the maximum values for total dissolved solids and chlorides at the Yuma station were 3,664 and 1,254 ppm, respectively, and at the Morelos Dam station were 2,082 and 673 ppm, respectively.

New and Alamo Rivers

The New and Alamo Rivers serve as drainage channels for the Imperial Valley which receives its water supply from the Colorado River. They originate in Mexico and flow northward into the Salton Sea. Streamflow in them consists almost entirely of waste water, primarily irrigation return water. They bear the sodium sulfate-chloride characteristics of the Colorado River, although the New River is predominantly sodium chloride. The waters are highly mineralized and extremely hard. In January 1962, new maximum values of record were established for total dissolved solids (3,924 ppm) at station 58, New River at Westmorland, and for total dissolved solids (3,230 ppm), chlorides (1,000 ppm), and sulfate (853 ppm) at station 60, Alamo River near Calipatria.

Whitewater River

Native waters in the Whitewater River, which flows southeasterly into the Salton Sea, are calcium bicarbonate with mineral concentrations (212-285 ppm range in total dissolved solids) much lower than those found in the other streams described for this region. However, flow in the lower reach of the river is maintained

by irrigation return from the Colorado River supply system as well as other waste waters, and, as it enters the Salton Sea, the waters resemble in mineral quality those of the New and Alamo Rivers.

Salton Sea

Waters of the Salton Sea, the terminous for much of the flows utilized in the region, are sodium chloride and similar in mineral concentration to ocean water. However, the calcium and sulfate concentrations are higher and the chloride concentrations are lower than ocean water. In 1962, total dissolved solids varied from 34,400 to 37,664 ppm.

Santa Ana Region (No. 8)

There are eight stations located in this region and all are on the Santa Ana River and three of its tributaries. However, hydrologic conditions at one of the stations, Lake Elsinore, are such that it is treated separately from the other seven stations. There are a number of substantial waste discharges entering the Santa Ana River and its tributaries and, since the natural flow is small when compared to other streams, they influence considerably the quality of water flowing in the river.

Waters of the Santa Ana River, as measured at station 51b, near Mentone (the uppermost station), are of excellent mineral quality (total dissolved solids vary from 95 to 200 ppm), soft, and calcium bicarbonate in character. As they pass through the highly developed San Bernardino-Riverside area, the contribution of waste water alters substantially their quality and at the remaining three stations they become calcium-sodium bicarbonate and calcium-sodium

bicarbonate-chloride in character. They also become very hard with values for total hardness ranging from 131 to 408 ppm. Total dissolved solids have ranged from 243 to 830 ppm. Occasionally boron at these stations has exceeded 0.5 ppm.

Flow in Warm Creek and in Chino Creek consists mostly of wastes discharged from the San Bernardino and Chino sewage treatment plants respectively. Water at station 50b, Warm Creek at Colton, is calcium bicarbonate-chloride and moderately hard with total dissolved solids ranging from 320 to 770 ppm. Chino Creek water is calcium-sodium bicarbonate in character and usually very hard. Total dissolved solids vary between 150 and 945 ppm.

The eighth station in the Santa Ana Region is Lake Elsinore near Elsinore (station 89). The outlet of Lake Elsinore is Temescal Creek, a tributary of the Santa Ana River near Prado Dam. There has seldom been any water in Lake Elsinore since regular sampling began (February 1952) and no observed flow in Temescal Creek throughout the period of record. Accordingly, few samples of the lake's waters have been collected over the years and the mineral quality has varied considerably. However, mineral concentrations have invariably been high, unsuitable for recognized beneficial uses.

In general, the significant changes in the quality of surface water in the Santa Ana Region during 1962 are attributable to the heavy rains which occurred early in the year. These rains produced flow in Warm Creek at San Bernardino (station 50c) for the first time since May 1958. The water was calcium bicarbonate, soft, and had a total dissolved solids content of 74 ppm. The stream ceased to flow a few weeks later.

The heavy rains of February and March 1962 also produced inflow to Lake Elsinore and a sample was collected from the lake in March, the first since May 1959. The total dissolved solids concentration was 21,676 ppm and the water was sodium chloride in character with sulfate a secondary anion. For comparison, the total dissolved solids concentration in May 1959 was 29,893 ppm. By May 1962 the lake was dry again.

San Diego Region (No. 9)

Since streamflow in the San Diego Region is minimal, the nine stations in the region are visited bimonthly. In fact, there was no flow at two of the stations, San Dieguito River near San Pasqual (64) and Tia Juana River at International Boundary (66), during 1962. In addition, five other stations were reported as dry much of the year. One new station, San Diego River at Mission Gorge Road (65c), was added to the network in this region in 1962. This station was established to more effectively monitor the quality of water flowing in the San Diego River.

The quality of surface waters in the San Diego Region varies considerably from stream to stream. Except during periods of runoff from storms, streamflow at most locations consists mainly of waste water discharged from municipal and industrial waste treatment facilities which have considerable bearing on the quality of water in the streams. Since these streams roughly parallel one another from the Santa Margarita River on the north to the Tia Juana River on the south, they will be discussed in that general order.

Waters of the Santa Margarita River are sodium-calcium bicarbonate-chloride in character, very hard, with mineral

concentrations ranging from 520 to 980 ppm, total dissolved solids. In the San Luis Rey River, the waters are calcium-sodium sulfate-bicarbonate, moderately hard to very hard, with somewhat lower mineral concentrations than the Santa Margarita River. Total dissolved solids vary from 320 to 610 ppm.

Streamflow in Escondido Creek near Harmony Grove (station 63) is primarily effluent from the city of Escondido sewage treatment plant. It is sodium chloride-sulfate in character and very hard. Total dissolved solids generally exceed 1,000 ppm and the chloride concentration is seldom less than 200 ppm. The boron concentration usually is in excess of 0.5 ppm and has been as high as 1.2 ppm.

Waters of the San Dieguito River below San Pasqual Valley (station 64) are sodium chloride or sodium bicarbonate in type with calcium as the secondary cation. They are moderately hard to very hard and mineral concentrations range from 130 to 760 ppm, total dissolved solids. There has been no flow at this station since May 1958.

During 1962, there were three stations in operation in the San Diego River Basin, two on the San Diego River itself and one on Forester Creek. Natural flow of substantial magnitude in the basin occurs only after intense storms and the bulk of the flow is composed of effluent from a number of sewage treatment plants which discharge to the river and its tributaries. Waters of the San Diego River are sodium chloride-sulfate and very hard. Total dissolved solids range between 900 and 2,800 ppm; values for chloride concentration usually exceed 300 ppm and those for boron concentration

usually are greater than 0.5 ppm but seldom exceed 1.0 ppm. A sample of natural runoff collected during a major storm in April 1958 contained the following concentrations: total dissolved solids - 241 ppm; chlorides - 54 ppm; and total hardness - 70 ppm. The water was sodium chloride-sulfate in character.

In March 1962, completion of the El Cajon sewer line to a point below station 65, San Diego River at Old Mission Dam, resulted in a decrease in flow at this station and in the cessation of flow at station 65a, Forester Creek at Mission Gorge Road. For this reason a new station, San Diego River at Mission Gorge Road (65c), was established in July 1962 and the Forester Creek station was discontinued at the close of the year.

Waters of Spring Valley Creek near La Pressa (station 65b), a tributary of the Sweetwater River, have generally been of very poor quality. They are sodium chloride in character and extremely hard with values for total hardness usually ranging from 480 to 1,100 ppm. Total dissolved solids have varied from 1,540 to 3,280 ppm and values for chloride concentration have been in excess of 410 ppm consistently.

Flow in the Tia Juana River in California is rare, occurring only after heavy rains. The water at station 66, Tia Juana River at International Boundary, is sodium chloride-bicarbonate and mineral concentrations vary considerably with total dissolved solids ranging from 340 to 1,625 ppm.

During 1962, significant changes were recorded at two stations in the San Diego Region. In February 1962, flow was reported at station 62, San Luis Rey River near Pala, the first since

January 1960. Maximum values of record for total dissolved solids (610 ppm), total hardness (294 ppm), and sulfate concentrations (198 ppm) were established. Previous maximum values for these constituents were 548, 281, and 179 ppm, respectively. The river was reported dry during the remainder of the year. In March 1962, minimum values of record for total dissolved solids (684 ppm), total hardness (244 ppm), chloride concentration (194 ppm), and most of the other common salts were established for station 65b, Spring Valley Creek near La Pressa. Following the recordation of these minimum values, mineral concentrations rose to a level slightly above that reported for 1961.

CHAPTER III. OTHER QUALITY CHARACTERISTICS

In addition to the characteristics imparted by the common mineral salts, there are other characteristics, both mineral and otherwise, which are necessary to adequately define the quality of the State's surface waters. This is particularly important where certain uses of the waters are involved.

In this chapter, these additional quality characteristics as determined in 1962 are described. Included are presentations on the minor constituents (heavy metals), arsenic, detergents (ABS), and dissolved oxygen as well as discussions of bacteriological quality and radioactivity.

Minor Constituents (Heavy Metals)

In 1962, a new procedure was adopted for the examination of surface waters for concentrations of heavy metals. Sixty-seven stations were selected for which spectrographic analyses are performed on samples collected each May and September. Determinations are made for 17 metals, and, where warranted, additional chemical analyses are made. The spectrographic analyses are performed by the U. S. Geological Survey, Quality of Water Branch, at its laboratory in Sacramento, California. Quantitative results are presented in micrograms per liter, essentially parts per billion. Results for 1962 are presented in Appendix B, Tables B-19 through B-27.

The following tabulation lists the maximum values for the various constituents analyzed and the stations at which they were found. There were no values above the minimum level of detection for Beryllium, Gallium, Germanium, and Zinc.

MAXIMUM CONCENTRATIONS OF VARIOUS METALS IN 1962
(By spectrograph)

Metal	: Concentration : : parts per billion :	Station (number)
Aluminum (Al)	255	Pit River near Canby (17a)
Bismuth (Bi)	29	Delta Cross Channel near Walnut Grove (98)
Cadmium (Cd)	13	Warm Creek near Colton (50b)
Cobalt (Co)	207	Kings River below Peoples Weir (34)
Chromium (Cr)	12	Coyote Creek near Madrone (82)
Copper (Cu)	62	Warm Creek near Colton (50b)
Iron (Fe)	237	Nacimiento River near San Miguel (43b)
Manganese (Mn)	215	Los Angeles River at Long Beach (48)
Molybdenum (Mo)	8.3	Rio Hondo at Whittier Narrows (49)
Nickel (Ni)	61	Warm Creek near Colton (50b)
Lead (Pb)	17	Feather River at Nicolaus (20)
Titanium (Ti)	9.8	Pit River near Canby (17a)
Vanadium (V)	15	Pit River near Canby (17a)

As might be expected, the more common metals found in water, aluminum, iron, and nickel, were reported for almost all stations at concentrations above the minimum levels of detection.

For two of the constituents, cadmium and manganese, concentrations at certain locations exceeded the limiting values for drinking water prescribed by the U. S. Public Health Service in its Drinking Water Standards. The value for cadmium is 0.01 ppm (or 10 ppb). At two stations, Warm Creek near Colton (50b) and Coyote Creek near Madrone (82), the concentrations for cadmium were reported as 13 ppb and 12 ppb, respectively. The latter value was found in May 1962 while the former was reported for September 1962. The recommended limit for manganese is 0.05 ppm or 50 ppb. Concentrations in excess of 50 ppb were found at the following locations:

<u>Station</u>	<u>Manganese Concentration (ppb)</u>
Los Angeles River at Long Beach (48)	215
Escondido Creek at Harmony Grove (63)	135 and 69
Santa Ana River near Norco (51e)	120
Salinas River near Spreckels (43)	103
Alameda Creek near Niles (73)	70

Arsenic

Determinations for the occurrence and concentration of arsenic are made semiannually at many of the stations maintained under this program. During 1962, determinations were made for 91 stations. Measurable concentrations of arsenic were found at 11 locations in May and at 14 locations in September. However, with the exception of two stations, the concentrations were well below the mandatory limit of 0.05 ppm prescribed by the U. S. Public Health Service Drinking Water Standards.

The first is station 48, Los Angeles River at Pacific Coast Highway, where excessive concentrations of arsenic repeatedly have been found and the waters are generally of such quality that they are unsuitable for beneficial use. The arsenic concentrations reported at this station were 1.0 ppm (May) and 3.5 ppm (September).

In September 1962, an arsenic concentration of 0.1 ppm was reported at station 31, Tuolumne River at Tuolumne City, which is located near the confluence with the San Joaquin River. There appears to be no explanation for this and it should be noted that this is the first time a measurable concentration for arsenic has been reported for this location.

ABS (Detergents)

During 1962, determinations of the concentration of ABS (alkyl benzene sulphonate, the active agent in popular synthetic detergents) were made for 68 stations mostly on a semiannual basis. Measurable concentrations were detected at 23 stations. No measurable concentrations in excess of 0.15 ppm were found at stations in the North Coastal (No. 1), San Francisco Bay (No. 2), Central Valley (No. 5), or Lahontan (No. 6) Water Pollution Control Regions. In fact, waters at a total of only eight stations in these areas (about two-thirds of the area of the entire State) were reported to contain ABS. In addition, at only one of these stations, Tuolumne River at Tuolumne City (station 31), was ABS found more than once during the year. A concentration of 0.1 ppm was found at this station in May and September.

Stations where the larger concentrations (0.5 ppm and over) were found are those at which surveillance for ABS is usually more frequent than twice yearly. They are also stations at which flows are known to contain effluent from sewage treatment plants. The highest concentrations of ABS were found in waters of the Salinas River near Spreckels (2.1 ppm in September), Los Angeles River at Long Beach (2.1 ppm in September), Warm Creek near Colton (1.8 to 6.2 ppm throughout the year), Santa Ana River near Norco (0.51 to 1.56 ppm except 0.05 ppm in December), Escondido Creek at Harmony Grove (1.8 to 4.0 ppm), San Diego River at Old Mission Dam (1.1 to 5.0 ppm), and San Diego River at Mission Gorge Road (4.8 to 6.0 ppm).

The highest concentrations of ABS in the State's surface waters were found at station 65b, Spring Valley Creek near La Pressa,

located near San Diego. Values for ABS ranged from 5.7 ppm to 12.2 ppm. The latter value is a maximum of record for this station and for all stations in the State since September 1960 when data on ABS was first collected.

Dissolved Oxygen .

Determination of the oxygen content of surface water has for several decades been the classic means for assessing the ability of a stream to assimilate waste. Persistent low levels of oxygen in solution are indicative of pollution or the threat of pollution.

Among the serious consequences resulting from a depleted supply of oxygen in water is its effect on the propagation of fish-life. The presence of oxygen in solution in surface waters in sufficient quantity is necessary for the support of fish and aquatic life; the latter are in turn necessary for the removal of organic waste. In other words, where the dissolved oxygen concentration is low, aquatic life are inhibited in their ability to remove organic material and fish are not only deprived of the oxygen required to survive but also are limited by the availability of aquatic life, their food supply. Included in general criteria proposed for the quality of fresh water that will support a "good mixed fish fauna" is the requirement that dissolved oxygen concentration be at least 5 ppm, although higher concentrations are desirable.

A determination of the dissolved oxygen content is made each time a sample is collected at all stations in the network maintained under this program. During 1962, concentrations below 5.0 ppm were found at 15 stations. However, at the majority (nine) of

these stations, values below 5.0 ppm were found only once. Values below 5.0 ppm were more frequently reported for the following stations: Salinas River near Spreckels (43), Los Angeles River at Long Beach (48), Tuolumne River at Tuolumne City (31), New River at International Boundary (57), Santa Ana River near Norco (51), and San Diego River at Old Mission Dam (65). Except for the Tuolumne River station, where only part of the flow stems from sewage, flow at these stations consists mainly of sewage or industrial waste.

The lowest values (down to 0.0 ppm) were reported at station 48, Los Angeles River at Long Beach, where, as has been mentioned several times in this report, the water is of such poor quality most of the time that it is unusable for recognized beneficial uses.

Other stations where lower values, those below 4.0 ppm, were reported were: station 43, Salinas River near Spreckels (three times); station 31, Tuolumne River at Tuolumne City (2.9 ppm in January); station 65, San Diego River at Old Mission Dam (3.6 ppm in January); and station 65c, San Diego River at Mission Gorge Road (3.6 ppm in September).

Bacteriological Quality

As a part of the program for determining the quality of the State's surface waters and the changes in their quality, bacteriological examination is made of samples collected at the majority of stations. Specifically, determination is made for the presence of coliform bacteria, the group which includes the pathogenic organisms associated with fecal contamination. Results are expressed

as the most probable number (MPN) of coliform bacteria per milliliter (ml) of sample.

The reader is cautioned that the results listed herein are not necessarily indicative of fecal contamination. Further substantiation of contamination requires additional, frequent sampling and more complex laboratory examination. As used in this program, the values serve primarily to establish background conditions of bacteriological quality and as a means of detecting changes of substantial magnitude.

During 1962, samples for bacteriological analyses were collected at 180 stations. As is to be expected, coliform bacteria were reported as present at all locations. At most stations and for much of the time, this indicates only that the possibility of contamination exists. Consistently low values were reported for 25 stations. The minimums ranged from 0.022 to 6 MPN per ml and the maximums from 0.92 to 130 MPN per ml. The lowest values reported were for station 12, Sacramento River at Keswick, and station 70, Los Angeles Aqueduct near San Fernando (0.022 MPN per ml), and at the three stations on Lake Tahoe (0.045 MPN per ml).

Consistently high values were reported throughout the year at both stations on the New River in the Imperial Valley area and at station 48, Los Angeles River near Long Beach, and during the first one-half of the year at stations 51e, Santa Ana River near Norco; 51a, Santa Ana River below Prado Dam; and 65a, Forester Creek at Mission Gorge Road (San Diego County).

Raw sewage is known to flow past station 57, New River at International Boundary, which accounts for the high values reported

for this station (1962 maximum - 700,000 MPN per ml). As for those reported at the downstream station, New River near Westmoreland (58), the flow has been considerably diluted by the time it reaches this point affording some opportunity for self-purification (maximum value - 70,000 MPN per ml). As has been mentioned several times, flow in the Los Angeles River at Long Beach consists almost entirely of sewage and industrial waste. The maximum value reported for this station was also 700,000 MPN per ml.

Flow in Forester Creek consists entirely of sewage and the maximum 1962 value was 240,000 MPN per ml. Much of the flow in the Santa Ana River at the Norco and Prado Dam stations is also composed of sewage. The maximum value for both stations was 70,000 MPN per ml.

Following is a tabulation of the maximum values for 1962 for coliform density at the 149 stations not previously discussed.

<u>Maximum value reported (MPN per ml)</u>	<u>Number of stations reporting maximum value</u>
210	1
230	15
240	4
290	1
460	1
620	19
650	1
700	7
1300	4
2100	1
2300	1
2400	30
7000	41
7000*	22

* Reported symbolically as "greater than" 7000.

Radioactivity

In addition to the information collected regarding the physical and chemical characteristics of the State's surface waters, data are also obtained under this program to determine the existing or background levels of radioactivity present in them. Such information will serve as a basis for evaluating the effects, if any, of future employment of radioactive substances, for whatever purpose, on California's water resources. Data have been collected at most stations twice yearly since the fall of 1952.

During May and September 1962, samples were collected for analyses of the level of radioactivity present at a total of 196 stations. In all instances, the concentrations were below the recommended criteria employed to judge the effects of radioactivity. Following is a tabulation of the maximum concentrations of alpha and beta activity found in 1962.

Concentration* (micromicrocuries/liter)		:	:	Location (station)
<u>May 1962</u>				
Dissolved Alpha	1.7			Santa Ana River, Mentone (51b)
Solid Alpha	7.4			Los Angeles River, Long Beach (48)
Dissolved Beta	23.3			Alameda Creek, Niles (73)
Solid Beta	19.3			Mad River, Arcata (6a)
<u>September 1962</u>				
Dissolved Alpha	1.9			Santa Ana River, Mentone (51b)
Solid Alpha	1.4			Spring Valley Creek, La Pressa (65b)
Dissolved Beta	85.6			Los Angeles River, Long Beach (48)
Solid Beta	29.4			Los Angeles River, Long Beach (48)

* Statistical confidence limits omitted.

The above tabulation indicates that 3 of the 8 values listed were found at the same location, namely the Los Angeles River at Long Beach. Since waters at this station are composed almost entirely of industrial waste water (except during periods of excessive storm runoff) which is of such poor quality (from a mineral standpoint) as to be unacceptable for beneficial use, these values are of small significance.

Values for concentrations of radioactivity in water at the 196 stations sampled in 1962 are listed in Tables B-28 through B-36 of Appendix B. Additional data on radioactivity in California waters are published by the California State Department of Public Health, Bureau of Radiological Health, in its publication, "Radiological Health News", and by the U. S. Public Health Service.

A P P E N D I X A
PROCEDURES AND CRITERIA



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Field Methods and Procedures

Agencies which participated in the field sampling program during 1962 are listed below, together with the number of stations sampled by each agency.

<u>Agency</u>	<u>Number of stations sampled</u>
State Department of Water Resources	194
United States Corps of Engineers	7
United States Bureau of Reclamation	20
United States Geological Survey	1*
City of Long Beach	1
City of Los Angeles	
Department of Public Health	1
Department of Water and Power	1
The Metropolitan Water District of Southern California	2
City of San Bernardino	2
City and County of San Francisco	<u>5</u>
Total	234

The frequency of sampling at each station varies considerably and is dependent on historic records, the need for the station, and the type of data specifically desired. Accordingly, the sampling frequency will range from semiannually to continuous.

A partial mineral analysis and physical examination is made for samples collected each time a station is visited. Twice

* The U. S. Geological Survey also collected additional samples at seven of the locations listed in the Department of Water Resources total.

each year, at the beginning and closing of the season of heavy use (essentially the irrigation season), the samples collected are subject to complete mineral analysis (in lieu of partial mineral analysis), analysis for detergents and arsenic content, and radioassay. Heavy metal analysis (by spectrograph) are made for 67 selected stations semiannually. Bacteriological analyses are made of samples collected at primary stations. From time to time, other analyses may be substituted. The samples collected for bacterial examination are kept in portable ice boxes until shipment or delivery to the laboratory. Every effort is made to get the samples to the laboratory as quickly as possible.

At the time the samples are collected for laboratory examination, field determinations are made for dissolved oxygen (DO) by the modified Winkler method, water temperature, and pH. Visual inspection is made of the stream or lake and the physical conditions are noted.

Where possible, the sampling stations have been selected so as to be at or near stream gaging stations so that gage heights can also be recorded at the time the water samples are collected. Instantaneous stream discharges at the time of sample collection are then obtained.

Laboratory Methods and Procedures

Methods of mineral and bacterial analysis, in general, are those described in the American Public Health Association publication, "Standard Methods for the Examination of Water and Sewage", 11th Edition, 1960. In some cases, the methods described in the following publications also have been employed.

United States Geological Survey. "Methods for Collection and Analysis of Water Samples." Water Supply Paper 1454. 1960.

California State Department of Public Works, Division of of Water Resources. "Methods of Analysis." October 1955.

The following tabulation indicates the constituents analyzed for in the various types of analysis performed in connection with this program.

Mineral and Related Analysis
(Wet analysis)

Specific Conductance
pH
Total Dissolved Solids
Turbidity
ABS (detergent)
Hardness
Calcium
Magnesium
Sodium
Potassium
Carbonate
Bicarbonate
Sulfate
Chloride
Nitrate
Fluoride
Boron
Silica
Phosphate
Arsenic

Mineral Analysis
(By spectrograph)

Aluminum
Beryllium
Bismuth
Cadmium
Chromium
Cobalt
Copper
Gallium
Germanium
Iron
Lead
Manganese
Molybdenum
Nickel
Titanium
Vanadium
Zinc

Bacteriological Analysis

Coliform

Radiological Analysis

Dissolved Alpha
Solid Alpha
Dissolved Beta
Solid Beta

In special cases, other constituents are analyzed. Where necessary, certain of the constituents listed under Spectrographic Analysis are determined chemically.

Water Quality Criteria

Criteria presented in the following sections can be utilized in evaluating the quality of water relative to existing or anticipated beneficial uses. It should be noted that these criteria are merely guides to the appraisal of water quality. Except for those constituents which are considered toxic to human beings, these criteria should be considered as suggested limiting values. A water which exceeds one or more of these limiting values need not be eliminated from consideration as a source of supply, but other sources of better quality water should be investigated.

Domestic and Municipal Water Supply

In general, water that is used for drinking or culinary purposes should be clear, colorless, odorless, pleasant to the taste, and free from toxic compounds. It should not contain excessive quantities of dissolved minerals, and must be free from pathogenic organisms.

Chapter 7 of the California Health and Safety Code contains provisions which relate to water supplies used for domestic purposes throughout the State. One of these provisions covers standards for quality of domestic water supplies. In essence, this section (No. 4010.5) refers to the drinking water standards promulgated by the U. S. Public Health Service for water used on interstate carriers as of March 1946.

Recently the U. S. Public Health Service revised (updated) its drinking water standards to take cognizance of man's changing environment and its effect on water supplies. Portions of these

new standards are presented herein. The complete standards, which cover definition of terms, bacteriological quality, physical characteristics, chemical characteristics, radioactivity, and recommended analytical methods, are described in publication No. 956 of the U. S. Department of Health, Education, and Welfare, Public Health Service, "Public Health Service Drinking Water Standards 1962".

Mineral Concentrations. The following tabulation gives the limiting concentrations of chemical constituents for drinking water, as prescribed by the U. S. Public Health Service.

UNITED STATES PUBLIC HEALTH SERVICE
DRINKING WATER STANDARDS 1962

<u>Constituent</u>	<u>Mandatory limit in ppm</u>
Arsenic (As)	0.05
Barium (Ba)	1.0
Cadmium (Cd)	0.01
Hexavalent chromium (Cr ⁺⁶)	0.05
Cyanide (CN)	0.2
Lead (Pb)	0.05
Selenium (Se)	0.01
Silver (Ag)	0.05

<u>Constituent</u>	<u>Nonmandatory, but rec- ommended limit in ppm</u>
Alkyl benzene sulphonate (detergent)	0.5
Arsenic (As)	0.01
Carbon chloroform extract (exotic organic chemicals)	0.2
Chloride (Cl)	250
Copper (Cu)	1.0
Cyanide (CN)	0.01
Fluoride (F)	See following page
Iron (Fe)	0.3
Manganese (Mn)	0.05
Nitrate (NO ₃)	45
Phenols	0.001
Sulfate (SO ₄)	250
Total dissolved solids	500
Zinc (Zn)	5

Interim standards for the upper limits of certain mineral constituents were adopted by the California State Board of Public Health in December 1959. Based on these standards, temporary permits may be issued for drinking water failing to meet the U. S. Public Health Service Drinking Water Standards, provided the mineral constituents in the following tabulation are not exceeded.

UPPER LIMITS OF TOTAL SOLIDS AND SELECTED MINERALS IN
DRINKING WATER AS DELIVERED TO THE CONSUMER
(parts per million)

	<u>Permit</u>	<u>Temporary Permit</u>
Total Solids	500 (1000)*	1500
Sulfates (SO ₄)	250 (500)*	600
Chlorides (Cl)	250 (500)*	600
Magnesium (Mg)	125 (125)*	150

Fluoride Concentration. The California State Board of Public Health has defined the maximum safe amounts of fluoride ion in drinking water in relation to mean annual temperature.

<u>Mean annual temperature</u>	<u>Mean monthly fluoride ion concentration (ppm)</u>
50° F	1.5
60° F	1.0
70° F and above	0.7

Hardness. Even though hardness of water is not included in the drinking water standards, it is of importance in domestic and industrial uses. Excessive hardness in water used for domestic purposes causes increased consumption of soap and formation of scale in pipes and fixtures. The following tabulation for degrees of hardness is suggested.

* Numbers in parentheses are maximum permissible to be used only where no other more suitable waters are available in sufficient quantity for use in the system.

Range of hardness expressed
as CaCO_3 , in ppm

Relative classification

0 - 100
101 - 200
Greater than 200

Soft
Moderately hard
Very hard

Radioactivity. As part of its new drinking water standards, the U. S. Public Health Service recently announced limits on concentrations of radioactivity in drinking waters. These limits are as follows:

<u>Radionuclide</u>	<u>Recommended maximum limits micromicrocuries per liter</u>
Radium 226	3
Strontium 90	10
Gross beta activity	1000*

According to the International Commission on Radiological Protection^{1/}, tentatively concurred in by the National Committee on Radiation Protection^{2/}, if the Radium-226 and Radium 228 activity in water is substantially less than 10 uuc/l, the maximum permissible concentration of otherwise unidentified radionuclides in water for individuals in the population at large may be considered to be 100 uuc/l.

For the purposes of the environmental survey of surface water made for this report, it has been assumed that the total dissolved and solid alpha activity is derived from Ra^{226} and Ra^{228} .

* In the known absence of strontium-90 and alpha emitters.

^{1/} "Report on Decisions of the 1959 Meeting of the International Committee on Radiological Protection (ICRP)." Radiology, Vol. 74, No. 1, January 1960, pp. 116-119.

^{2/} "Somatic Radiation Dose for the General Population, Ad Hoc Committee of the National Committee on Radiation Protection and Measurements." Science, Vol. 131, No. 3399, February 19, 1960, pp. 482-486.

Industrial Water Supply

Water quality criteria for industrial waters are as varied and diversified as industry itself. Food processing, beverage production, pulp and paper manufacturing, and textile industries have exacting requirements. However, many cooling or metallurgical operations permit the use of poor quality water. In general, where a water supply meets drinking water standards, it is satisfactory for industrial use, either directly or following a limited amount of polishing treatment by the industry.

Irrigation Water

Criteria for mineral quality of irrigation water have been developed by the Regional Salinity Laboratories of the U. S. Department of Agriculture in cooperation with the University of California. Because of diverse climatological conditions and the variation in crops and soils in California, only general limits of quality for irrigation waters can be suggested.

QUALITATIVE CLASSIFICATION OF IRRIGATION WATERS

	Class 1	Class 2	Class 3
Chemical properties	Excellent to good	Good to injurious	Injurious to unsatisfactory
Total dissolved solids, in ppm	Less than 700	700 - 2000	More than 2000
Conductance, in micromhos at 25° C	Less than 1000	1000 - 3000	More than 3000
Chlorides in ppm	Less than 175	175 - 350	More than 350
Sodium in percent of base constituents	Less than 60	60 - 75	More than 75
Boron in ppm	Less than 0.5	0.5 - 2.0	More than 2.0

These criteria have limitations in actual practice. In many instances a water may be wholly unsuitable for irrigation under certain conditions of use, and yet be completely satisfactory under other circumstances. Consideration also should be given to soil permeability, drainage, temperature, humidity, rainfall, and other conditions that can alter the response of a crop to a particular quality of water.

Fish and Aquatic Life

Water of suitable quality and quantity is a fundamental requirement for the existence of an abundant supply of fish and aquatic life. It is important that water quality conditions be such as to maintain an abundant supply of food required by fish and other desirable forms of aquatic life. Streams utilized for the propagation of fish and aquatic life should be free of toxic or harmful concentrations of mineral and organic substances and excessive turbidity. Extensive field and laboratory studies conducted by the U. S. Fish and Wildlife Service show that, among other things, the water in streams supporting a mixed fauna of fresh water fish such as bluegill, bass, crappie, and catfish should have the following properties:

- (a) Dissolved oxygen not less than 5 ppm (at least 6 ppm for salmonids),
- (b) pH range between 6.5 and 8.5,
- (c) Ionizable salts, as indicated by conductivity, between 150 and 500 micromhos at 25° Centigrade, and in general not exceeding 1,000 micromhos,
- (d) Ammonia not exceeding 1.5 ppm.

Mineral salts of high toxicity to fish are those of silver, mercury, copper, zinc, lead, cadmium, nickel, trivalent and hexavalent chromium, and others. Some pairs of toxicants, such as copper and zinc (also copper and cadmium, nickel and zinc), are far more toxic when combined than when they occur individually. Other toxic substances, when combined, neutralize each other through antagonism or chemical reaction (e.g., free cyanide combines with toxic heavy metal cations, such as nickel and copper ions, to form relatively harmless metalloxyanide complexes).

Development and use of water resources, including the construction of dams for storage of water, frequently affect water temperatures which in turn affect fish and other aquatic life. Optimum water temperatures for cold water fish, such as trout and salmon, normally lie between 32° and 65° Fahrenheit. The cold water species are generally intolerant of temperatures above 75° Fahrenheit and will seek the lower temperature where possible. Warm-water fish such as minnows, carp, catfish, perch, sunfish, and bass normally live in water having temperatures ranging from near 32° to 86° Fahrenheit. Acclimatization enables certain warm water species to live in waters having temperatures as high as 90° Fahrenheit, although they will migrate, where possible, to waters below 86° Fahrenheit.

Chemical Classification of Waters

Waters are classified, with respect to mineral composition, in terms of the predominant ions. Specifically, the name of an ion is used where it constitutes at least half of its ionic group, expressed in equivalents per million (epm). Where no one ion fulfills

the requirement, a hyphenated combination of the two most abundant constituents is used. Thus a calcium bicarbonate water denotes that calcium constitutes at least half of the cations and bicarbonate represents at least half of the anions. Where calcium, though predominant, is less than half of the total cations with sodium next in abundance, and where bicarbonates are more than half of the total anions, the name is modified to calcium-sodium bicarbonate.

A P P E N D I X B

DATA FOR 1962



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TABLE B-1
SAMPLING STATION DATA AND INDEX
NORTH COASTAL REGION (NO. 1)

Station	Station Number	Location ^a	Period ^b of Record	Frequency ^c of Sampling	Sampled ^d by	Analysis on page
Antelope Creek near Tennant	1e	43N/1N-25	March 1959			93, 375
Big River near Mouth	8c	17N/17W-24	Jan. 1959			94, 377
Butte Creek near Macdoel	1d	45N/1W-30	March 1959			95, 375
Eel River near Dos Rios	5d	21N/13W-31	April 1958			96, 376
Eel River near McGann	5	2S/3E-3*	April 1951			97, 376
Eel River at Scotia	6	1N/1E-5*	April 1951			98, 357, 376
Eel River, *Middle Fork at Dos Rios	5c	21N/13W-6	April 1958			99, 357, 376
Eel River, South Fork near Miranda	7	3S/4E-30*	April 1951			100, 376
Gualala River, South Fork near Annapolis	9a	10N/14W-21	Jan. 1959			101, 377
Klamath River above Hamburg Reservoir site	1c	46N/10W-14	Dec. 1958			102, 375
Klamath River below Iron Gate Dam	1f	47N/5W-17	Dec. 1961			103, 357, 375
Klamath River near Klamath	3	13N/2E-17*	April 1951			104, 357, 375
Klamath River near Seiad Valley	2b	46N/12W-3	Dec. 1958			105, 357, 375
Klamath River at Somesbar	2	11N/6E-4*	April 1951			106, 357, 375
Mad River near Arcata	6a	6N/1E-15*	Nov. 1958			107, 357, 376
Mattole River near Petrolia	7a	2S/2W-11*	Jan. 1959			108, 376
Navarro River near Navarro	8b	15N/16W-7	Jan. 1959			109, 377
Noyo River near Fort Bragg	10c	18N/17W-10	Jan. 1959			110, 377
Outlet Creek near Longvale	5b	21N/13W-31	May 1958			111, 376
Redwood Creek at Orick	3b	10N/1E-4*	Nov. 1958			112, 375
Russian River at Guerneville	10	8N/10N-32	April 1951			113, 357, 377
Russian River near Healdsburg	9	9N/9W-22	April 1951			114, 377
Russian River near Hopland	8a	14N/12W-36	April 1951			115, 377
Russian River, East Fork at Potter Valley Powerhouse	10a	17N/11W-6	June 1951			116, 377
Salmon River at Somesbar	2a	11N/6E-2*	Nov. 1958			117, 375
Scott River near Fort Jones	1b	44N/10W-28	Dec. 1958			118, 375
Shasta River near Yreka	1a	46N/7W-24	Dec. 1958			119, 375
Smith River near Crescent City	3a	16N/1E-10*	April 1951			120, 375
Trinity River near Burnt Ranch	4b	5N/7E-19*	April 1958			121, 376
Trinity River near Hoopa	4	8N/5E-31*	April 1951			122, 357, 376
Trinity River at Lewiston	4a	33N/8W-19	April 1951			123, 376
Van Duzen River near Bridgeville	5a	1N/3E-17*	April 1958			124, 376

a Except as indicated below, location is referenced to Mt. Diablo Base and Meridian

* Humboldt Base and Meridian

b Beginning of record

c All stations sampled monthly

d All stations sampled by Department of Water Resources

TABLE B-2
SAMPLING STATION DATA AND INDEX

SAN FRANCISCO BAY REGION (NO. 2)

Station	Station Number	Location ^a	Period of Record ^b	Frequency of Sampling	Sampled by ^d	Analysis on page
Alameda Creek near Livermore	73	4S/1W-15	Dec. 1951		DWR	125, 359, 379
Arroyo Del Valle near Livermore	71	4S/2E-4	July 1958		DWR	126, 379
Carquinez Straits at Martinez	28a	2N/3W-13	March 1955		USBR	127
Coyote Creek near Madrone	82	9S/3E-9	Jan. 1952		DWR	128, 359, 379
Los Gatos Creek near Los Gatos	74	8S/1W-29	Dec. 1951		DWR	129, 379
Napa River near St. Helena	72	8N/5W-32	Dec. 1951		DWR	130, 359, 379
Sacramento River near Mallard Slough	15c	2N/1E-5	March 1955		USBR	131

a Location is referenced to Mt. Diablo Base and Meridian

b Beginning of record

c All stations sampled monthly

d DWR-Department of Water Resources; USBR-United States Bureau of Reclamation



TABLE B-3
SAMPLING STATION DATA AND INDEX

CENTRAL COASTAL REGION (NO. 3)

Station	Station Number	Location ^a	Period of Record ^b	Frequency of Sampling ^c	Sampled by ^d	Analysis on page
Carmel River at Robles Del Rio	83	16S/1E-82	July 1952			133, 381
Cuyama River near Garey	44a	10N/33W-25**	Oct. 1958			134, 381
Nacimiento River near San Miguel	43b	25S/11E-4	Oct. 1958			135, 361, 381
Pajaro River at Chittenden	77	12S/1E-12	Dec. 1951			136, 361, 381
Salinas River near Bradley	43c	23S/10E-15	Oct. 1958			137, 381
Salinas River at Paso Robles	43a	26S/12E-33	April 1951			138, 381
Salinas River near Spreckels	43	15S/3E-8	Apr. 1951- May 1957 - Apr. 1958			139, 361, 381
San Antonio River near Pleyto	43d	24S/9E-3	Feb. 1954			140, 381
San Benito River near Bear Valley Fire Station	77a	15S/7E-28	July 1958			141, 381
San Lorenzo River at Big Trees	75	10S/2W-26	Dec. 1951			142, 381
Santa Ynez River at Cachuma Reservoir	44b	6N/30W-19**	April 1958			143, 381
Santa Ynez River near Solvang	45a	6N/31W-22**	April 1951			144, 361
Soquel Creek at Soquel	76	11S/1W-10	Dec. 1951			145, 381
Uvas Creek near Morgan Hill	96	10S/3E-18	July 1952			146, 381

a Except as indicated below, location is referenced to Mt. Diablo Base and Meridian

* Humboldt Base and Meridian

** San Bernardino Base and Meridian

b Beginning of record

c All stations sampled monthly

d All stations sampled by Department of Water Resources

TABLE B-4
SAMPLING STATION DATA AND INDEX
LOS ANGELES REGION (NO. 4)

Station	Station Number	Location ^a	Period of Record ^b	Frequency of Sampling ^c	Sampled by ^d	Analysis on page
Colorado River Aqueduct at La Verne	69	1S/7W-6	April 1951	C	MWD	147
Los Angeles Aqueduct near San Fernando	70	3N/15W-30	April 1951	M	LADW&P	148
Los Angeles River at Long Beach	48	4S/13W-26	April 1951	M	LBHD	149, 363, 383
Los Angeles River at Los Angeles	47	1S/13W-15	April 1951	M	LAHD	150, 151, 383
Matilija Creek above Matilija Dam	45b	5N/23W	May 1953	M	DWR	152, 383
Mission Creek at Whittier Narrows	49a	2S/11W-6	April 1951	M	DWR	153, 363, 383
Piru Creek near Piru	46c	4N/18W-20	June 1957	M	DWR	154, 383
Rio Hondo at Whittier Narrows	49	2S/11W-6	April 1951	M	DWR	155, 363, 383
San Gabriel River at Azusa Power House	50d	1N/10W-22	March 1957	M	DWR	156, 384
San Gabriel River at Whittier Narrows	50	2S/11W-5	April 1951	M	DWR	157, 363, 383
Santa Clara River at Los Angeles-Ventura County Line	46	4N/17W-30	April 1951	M	DWR	158, 363, 383
Santa Clara River near Santa Paula	46a	3N/21W-12	April 1951	M	DWR	159, 363, 383
Santa Paula Creek near Santa Paula	46e	4N/21W-27	June 1957	M	DWR	160, 383
Sesoe Creek near Fillmore	46d	4N/20W-12	June 1957	M	DWR	161, 383
Ventura River near Ventura	61	3N/23W-8	May 1951	M	DWR	162, 363, 384

a Location is referenced to San Bernardino Base and Meridian

b Beginning of record

c M-Monthly, B-Bimonthly, Q-Quarterly, S-Semiannually, C-Composite of 24-hour samples taken each day

d MWD-Metropolitan Water District of Southern California; LADW&P-Los Angeles Department of Water and Power;

LAHD-Los Angeles Health Department; LBHD-Long Beach Health Department; DWR-Department of Water Resources

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TABLE B-5
SAMPLING STATION DATA AND INDEX

CENTRAL VALLEY REGION (NO. 5)

Station	Station Number	Location ^a	Period of Record ^b	Frequency of Sampling ^c	Sampled by ^d	Analysis on page
American River at Fair Oaks	22d	9N/6E-13	March 1951 to Sep 30, 1962	D	USGS	163
American River at Fair Oaks			Jan. 1938	Q	USBR	164
American River at Nimbus Dam	22a	9N/7E-16	Nov. 1958	M	DWR	165, 365, 387
American River at Sacramento	22	8N/5E-3	April 1951	M	DWR	166, 365, 387
American River, Middle Fork near Auburn	22b	12N/9E-6	July 1958	M	DWR	167, 387
American River, South Fork near Lotus	22c	11N/9E-11	July 1958	M	DWR	168, 387
Antelope Creek near Mouth	88c	26N/2W-17	Oct. 1958	M	DWR	169, 391
Antelope Creek near Red Bluff	88e	27N/2W-8	Oct. 1958	M	DWR	170, 391
Battle Creek near Cottonwood	88b	29N/2W-6	April 1958	M	DWR	171, 391
Bear River near Mouth	20b	13N/4E-20	Nov. 1958	M	DWR	172, 387
Bear River near Wheatland	78	13N/5E-3	Dec. 1951	M	DWR	173, 366, 390
Big Creek above Pine Flat Dam	33d	12S/25E-4	July 1960	M	USCE	174, 389
Big Chico Creek at Chico	85a	22N/1E-28	Jan. 1959	M	DWR	175, 390
Big Chico Creek near Chico	85	22N/2E-9	July 1952	M	DWR	176
Butte Creek near Chico	84	22N/2E-36	July 1952	M	DWR	177
Cache Creek near Capay	80	10N/2W-8	Dec. 1951	M	DWR	178, 366, 390
Cache Creek near Lower Lake	42	12N/6W-6	April 1951	M	DWR	179, 366, 390
Cache Creek, North Fork near Lower Lake	79	14N/6W-31	Dec. 1951	M	DWR	180, 390
Cache Slough below Lindsey Slough	110a	5N/3E-31	April 1952	Q	USBR	181
Calaveras River at Jenny Lind	16a	3N/10E-27	April 1951	M	DWR	182, 386
Calaveras River near Stockton	16b	2N/6E-26	July 1958	M	DWR	183
Chowchilla River at Buchanan Damsite	114	8S/18E-22	Jan. 1958	M	DWR	184, 392
Clear Creek near Igo	12d	31N/6W-27	April 1958	M	DWR	185, 385
Clear Lake at Lakeport	41	14N/10W-24	April 1951	M	DWR	186, 366, 390
Colusa Trough near Colusa	87	16N/2W-34	July 1952	M	DWR	187, 390
Contra Costa Canal at 1st Pump Lift	109a	2N/2E-25	Jan. 1955	M	USBR	188
Cosumnes River at McCoanell	94a	6N/6E-20	July 1958	M	DWR	189, 366, 391
Cosumnes River at Michigan Bar	94	8N/8E-36	July 1952	M	DWR	190, 391
Cottonwood Creek near Cottonwood	12b	29N/3W-7	April 1951	M	DWR	191, 385
Cottonwood Creek below North Fork Cottonwood Creek	11a	29N/6W-2	Oct. 1958	M	DWR	192, 385
Cottonwood Creek, South Fork above Cottonwood Creek	11b	29N/4W-17	Nov. 1958	M	DWR	193, 385
Cow Creek near Millville	88a	31N/3W-32	April 1958	M	DWR	194, 391
Delta Cross Channel near Walnut Grove	98	5N/4E-35	Sept. 1952	M	DWR	195, 366
Delta-Mendota Canal near Mendota	92	13S/15E-19	July 1952	M	DWR	196, 366, 391
Delta-Mendota Canal near Tracy	93	1S/4E-30	July 1952	M	DWR	197, 366, 391
	93	2S/3E-1R	July 1955	D	USGS	198, 199, 200, 201
Dutch Slough at Farrar Park Bridge	108b	2N/3E-22	May 1955	Feb-Oct	USBR	202
Elder Creek at Gerber	95a	25N/3W-2	Jan. 1959	M	DWR	203, 391
Elder Creek near Paskenta	13e	25N/6W-14	Oct. 1958	M	DWR	204, 386

a Location is referenced to Mt. Diablo Base and Meridian

b Beginning of record

c M-Monthly, B-Bimonthly, Q-Quarterly, S-Semiannually, D-Composites of samples collected daily

d USGS-United States Geological Survey, Quality of Water Branch; USBR-United States Bureau of Reclamation; DWR-Department of Water Resources; USCE-United States Army Corps of Engineers

TABLE B-5
SAMPLING STATION DATA AND INDEX

CENTRAL VALLEY REGION (NO. 5) (Continued)

Station	Station Number	Location ^a	Period of Record ^b	Frequency of Sampling ^c	Sampled by ^d	Analysis on page
False River at Webb Pump	112a	3N/3E-36	May 1955	Feb - Oct	USBR	205
Feather River at Nicolaus	20	12N-3E-12	April 1951 (March 1951- Sept. 30, 1962)	M D	DWR USGS	206, 365, 387 207, 208
Feather River near Oroville	19	17N/4E-2	April 1951	M	DWR	209, 365, 387
Feather River below Shanghai Bend	20a	14N/3E-11	July 1958	M	DWR	210, 387
Fresno River near Daulton	113	10S/19E-3	Jan. 1958	M	DWR	211, 392
Grant Line Canal at Tracy Road Bridge	103a	1S/5E-29	July 1958	M	DWR	212, 392
Indian Creek near Crescent Mills	17d	26N/9E-25	April 1951	M	DWR	213, 386
Indian Slough near Brentwood	107	1N/3E-23	Sept. 1952	M	DWR	214, 392
Italian Slough near Mouth	106	1S/4E-7	Sept. 1952	M	DWR	215, 392
Kaweah River below Terminus Dam	35	17S/28E-26	April 1951	M	(DWR-USCE)	216, 389
Kern River near Bakersfield	36	28S/28E-2	April 1951	M	DWR	217, 366, 390
Kern River below Isabella Dam	36a	26S/33E-30	Sept. 1955	M	USCE	218, 390
Kern River near Kernville	36b	23S/32E-14	Sept. 1955	M	USCE	219, 390
Kings River below North Fork	33c	12S/26E-21	Sept. 1955	M	USCE	220, 389
Kings River below People's Weir	34	17S/22E-1	April 1951	M	DWR	221, 366, 389
Kings River below Pine Flat Dam	33b	13S/24E-2	Sept. 1955	M	USCE	222, 389
Lindsey Slough near Rio Vista	110	5N/2E-25	Oct. 1952	M	DWR	223
Little Potato Slough at Terminus	99	3N/4E-13	Sept. 1952	M	DWR	224, 392
McCloud River above Shasta Lake	18	36N/3W-31	April 1951	M	DWR	225, 386
Merced River below Exchequer Dam	32a	4S/15E-14	April 1951	M	DWR	226, 389
Merced River near Stevinson	32	6S/9E-36	April 1951	M	DWR	227, 366, 389
Mill Creek near Mouth	88	25N/2W-9	July 1952	M	DWR	228
Mokelumne River below Cosumnes River	23b	5N/5E-29	June 1952 (except 1956)	I	USBR	229
Mokelumne River below Georgiana Slough	23c	3N/4E-7	May 1952 (except 1956)	I	USBR	230
Mokelumne River near Lancha Plana	23a	4N/10E-4	April 1951	M	DWR	231, 388
Mokelumne River at Woodbridge	23	4N/6E-34	April 1951	M	DWR	232, 365, 387
Old River at Clifton Court Ferry	104	1S/4E-20	Sept. 1952	M	DWR	233, 392
Old River at Holland Tract	108a	2N/4E-19	March 1952	M	USBR	234
Old River at Mandeville Island	112	2N/4E-6	Dec. 1954	M	DWR	235, 366
Old River at Orwood Bridge	108	1N/4E-17	Sept. 1952	M	DWR	236, 392
Old River near Tracy	103	2S/5E-6	Oct. 1952	M	DWR	237, 392
Paynes Creek near Red Bluff	88g	28N/2W-3	Oct. 1958	M	DWR	238, 391
Pit River near Bieber	17e	37N/7E-34	Oct. 1958	M	DWR	239, 386
Pit River near Canby	17a	41N/9E-10	April 1951	M	DWR	240, 365, 386
Pit River near Montgomery Creek	17	35N/1W-32	April 1951	M	DWR	241, 386
Pit River, South Fork near Likely	18a	39N/13E-11	Aug. 1958	M	DWR	242, 387
Putah Creek near Winters	81	8N/2W-27	Dec. 1951	M	DWR	243, 366, 390
Red Bank Creek near Red Bluff	88d	26N/5W-22	Jan. 1959	M	DWR	244, 391

a Location is referenced to Mt. Diablo Base and Meridian

b Beginning of record

c M-Monthly, B-Bimonthly, Q-Quarterly, S-Semiannually, I-Irregular, D-Composites of samples collected daily

d USGS-United States Geological Survey, Quality of Water Branch; USBR-United States Bureau of Reclamation; DWR-Department of Water Resources; USCE-United States Army Corps of Engineers

TABLE B-5
SAMPLING STATION DATA AND INDEX

CENTRAL VALLEY REGION (NO. 5) (Continued)

Station	Station Number	Location ^a	Period of Record ^b	Frequency of Sampling ^c	Sampled by ^d	Analysis on page
Rock Slough near Knightsen	109	2N/3E-33	Sept. 1952	M	DWR	245, 392
Sacramento River at Bend	12c	28N/3W-20	Aug. 1959 May 1955	M D	DWR USGS	246, 365, 385 247, 248, 249
Sacramento River at Boyers Bend	14c	13N/1E-22	July 1960	D	USGS	250, 251, 252
Sacramento River at Butte City	87a	19N/1W-32	Aug. 1959	M	DWR	253, 254, 255, 256, 390
Sacramento River at Colusa	13b	19N/1W-32	Oct. 1958	M	DWR	257, 365, 385
Sacramento River above Colusa Trough	14b	11N/2E-14	July 1960	M	DWR	258, 365, 386
Sacramento River at Delta	11	36N/5N-35	April 1951	M	DWR	259, 385
Sacramento River at Freeport	15b	7N/4E-14	June 1960 June 1960	M D	DWR USGS	260, 365, 386 261, 262, 263
Sacramento River near Hamilton City	13	22N/1W-20	April 1951	M	DWR	264, 365, 385
Sacramento River at Keswick	12	32N/5W-28	April 1951	M	DWR	265, 365, 385
Sacramento River at Rio Vista	16	4N/3E-30	April 1951	M	DWR	266, 365, 386
Sacramento River at Snodgrass Slough	97	6N/4E-22	June 1938	M	USBR	267
Sacramento River at Toland Landing	15a	3N/2E-21	July 1952	Feb-Oct	USBR	268
Sacramento Slough near Knights Landing	14a	11N/2E-20	June 1951	M	DWR	269, 386
Salt Slough at San Luis Ranch	24c	9S/11E-7	Nov. 1958	M	DWR	270, 388
San Joaquin River at Antioch	28	2N/2E-18	April 1951	M	DWR	271, 388
San Joaquin River at Brandt Bridge	101a	1S/6E-9	*	Q	USBR	272
San Joaquin River at Crows Landing Bridge	26b	6S/9E-7	Jan. 1962 June 1952	M M	DWR USBR	273, 388 274
San Joaquin River near Dos Palos	25a	11S/13E-12	Sept. 1938	M	USBR	275
San Joaquin River at Fremont Ford Bridge	25c	7S/9E-24	July 1955	M	DWR	276, 365, 388
San Joaquin River at Friant Dam	24	11S/21E-7	April 1951	M	DWR	277, 388
San Joaquin River at Garwood Bridge	101	1K/6E-16	Sept. 1952	M	DWR	278
San Joaquin River near Grayson	26	4S/7E-24	April 1951	M	CCSF	279, 388
San Joaquin River at Hills Ferry Bridge	25b	7S/9E-3	Oct. 1958	M	DWR	280, 388
San Joaquin River at Jersey Point	28b	2N/3E-6	July 1952	Feb-Oct	USBR	281
San Joaquin River at Maze Road Bridge	26a	3S/7E-29	April 1951	M	CCSF	282, 388
San Joaquin River near Mendota	25	13S/15E-7	April 1951	M	DWR	283, 388
San Joaquin River above Merced River	30a	11S/13E-12	Sept. 1938	M	USBR	284
San Joaquin River at Mossdale Bridge	102	2S/6E-4	Sept. 1952	M	DWR	285, 392
San Joaquin River at Patterson Bridge (at Patterson Water Company)	27a	7S/9E-3	Jan. 1962 June 1938	M M	DWR USBR	286, 388 287
San Joaquin River above Salt Slough	111b	7S/10E-36	Sept. 1955	M	USBR	288
San Joaquin River at San Andreas Landing	112b	3N/3E-13	March 1952	M	USBR	289
San Joaquin River near Vernalis	27	3S/6E-13	April 1951 March 1951	M D	DWR USGS	290, 365, 388 291, 292, 293, 294
San Joaquin River at West Stanislaus ID Intake	27b	4S/7E-10	June 1938	M	USBR	295
San Joaquin River at Whitehouse	24b	13S/15E-25	Nov. 1953	I	USBR	296
Stanislaus River near Mouth	29	3S/7E-17	April 1951	M	DWR	297, 365, 389

a Location is referenced to Mt. Diablo Base and Meridian

b Beginning of record

* August 1940 - June 1945, March 1948 - December 1955, and March 1957 to date

c M-Monthly, B-Bimonthly, Q-Quarterly, S-Semiannually, D-Composites of samples collected daily, I-Irregular

d DWR-Department of Water Resources; USGS-United States Geological Survey, Quality of Water Branch;

USBR-United States Bureau of Reclamation; CCSF-City and County of San Francisco

TABLE B-5
SAMPLING STATION DATA AND INDEX
CENTRAL VALLEY REGION (NO. 5) (Continued)

Station	Station Number	Location ^a	Period of Record ^b	Frequency of Sampling ^c	Sampled by ^d	Analysis on page
Stanislaus River below Tulloch Dam	29a	1S/12E-1	July 1956	M	DWR	298, 389
Stockton Ship Channel on Rindge Island	100	2N/5E-28	Sept. 1952	M	DWR	299
Stony Creek at Black Butte Dam Site	13c	23N/4W-29	Jan. 1958	M	DWR	300, 385
Stony Creek near Hamilton City	13a	22N/2W-36	April 1951	M	DWR	301, 365, 385
Thomes Creek near Mouth	95b	25N/3W-35	Jan. 1959	M	DWR	302, 391
Thomes Creek near Paskenta	13d	23N/6W-4	Oct. 1958	M	DWR	303, 385
Tule River below Success Dam	91	22S/28E-3	July 1952	M	DWR - USCE	304, 366, 391
Tuolumne River below Don Pedro Dam	31a	3S/14E-3	April 1951	M	CCSF	305, 389
Tuolumne River at Hickman-Waterford Bridge	30	3S/11E-34	April 1951	M	CCSF	306, 389
Tuolumne River at Tuolumne City	31	4S/8E-7	April 1951	M	CCSF	307, 366, 389
Yuba River at Marysville	21	15N/4E-18	April 1951	M	DWR	308, 365, 387
Yuba River near Smartsville	21a	16N/6E-20	April 1951	M	DWR	309, 387

a Location is referenced to Mt. Diablo Base and Meridian

b Beginning of record

c M-Monthly, B-Bimonthly, Q-Quarterly, S-Semiannually, D-Composites of samples collected daily, I-Irregular

d DWR-Department of Water Resources; USGS-United States Geological Survey, Quality of Water Branch;

USBR-United States Bureau of Reclamation; USCE-United States Army Corps of Engineers;

CCSF-City and County of San Francisco

TABLE B-6
SAMPLING STATION DATA AND INDEX
LAHONTIAN REGION (NO. 6)

Station	Station Number	Location ^a	Period of Record ^b	Frequency of Sampling ^c	Sampled by ^d	Analysis on page
Carson River, East Fork near Markleeville	115	10N/20E-27	Sept. 1958			311, 393
Carson River, West Fork at Woodfords	115a	11N/19E-34	Aug. 1958			312, 393
Lake Tahoe at Bijou	39	13N/18E-33	April 1951			313, 393
Lake Tahoe at Tahoe City	38	15N/17E-7	April 1951			314, 367, 393
Lake Tahoe at Tahoe Vista	37	16N/17E-14	April 1951			315, 393
Mojave River at the Forks	67a	3N/3W-18**	July 1957			316, 393
Mojave River near Victorville	67	6N/4W-29**	March 1951			317, 367, 393
Susan River at Susanville	17b	30N/12E-31	April 1951			318, 393
Truckee River near Farad	53	18N/17E-12	April 1951			319, 367, 393
Truckee River near Truckee	52	17N/16E-28	April 1951			320, 393
Walker River, East near Bridgeport	116a	6N/25E-34	Aug. 1958			321, 393
Walker River, West near Coleville	116	6N/23E-9	Aug. 1958			322, 393

a Except as indicated below, location is referenced to Mt. Diablo Base and Meridian

* Humboldt Base and Meridian

** San Bernardino Base and Meridian

b Beginning of record

c All stations sampled monthly

d All stations sampled by Department of Water Resources

TABLE B-7
SAMPLING STATION DATA AND INDEX
COLORADO RIVER BASIN REGION (NO. 7)

Station	Station Number	Location ^a	Period of Record ^b	Frequency of Sampling ^c	Sampled by ^d	Analysis on Page
Alamo River near Calipatria	60	11S/13E-22	March 1951	B	DWR	323, 395
Alamo River at International Boundary	59	17S/16E-18	Feb. 1951	B	DWR	324, 395
All-American Canal near Pilot Knob	56a	16S/21E-24	May 1953	S	DWR	325, 395
Colorado River near Blythe	56c	7S/23E-2	May 1953	S	DWR	326, 395
Colorado River at Colorado River Aqueduct Intake (Lake Havasu)	56d	3N/27E-28	Nov. 1953	M	MWD	327
Colorado River below Morelos Dam	56b	8S/24W-28*	May 1953	S	DWR	328, 395
Colorado River below Parker Dam	55	2N/27E-16	April 1951	S	DWR	329, 395
Colorado River near Topock, Arizona	54	7N/24E-8	April 1951	S	DWR	330, 395
Colorado River near Yuma, Arizona	56	16S/22E-36	April 1951	S	DWR	331, 369, 395
New River at International Boundary	57	17S/14E-14	April 1951	B	DWR	332, 395
New River near Westmoreland	58	12S/13E-30	Feb. 1951	B	DWR	333, 395
Salton Sea at Salton Sea State Park	68a	7S/10E-2	March 1955	B	DWR	334, 396
Whitewater River near Mecca	68b	7S/9E-31	July 1957	B	DWR	335, 396
Whitewater River near Whitewater	68	3S/3E-2	Feb. 1951	B	DWR	336, 395

a Except as indicated below, location is referenced to San Bernardino Base and Meridian

* Gila and Salt River Base and Meridian

b Beginning of record

c M-Monthly, B-Bimonthly, Q-Quarterly, S-Semiannually

d DWR-Department of Water Resources; MWD-Metropolitan Water District of Southern California



TABLE B-8
SAMPLING STATION DATA AND INDEX

SANTA ANA REGION (NO. 8)

Station	Station Number	Location ^a	Period of Record ^b	Frequency of Sampling ^c	Sampled by ^d	Analysis on page
Chino Creek near Chino	86	2S/8W-36	April 1952	M	DWR	337, 397
Lake Elsinore near Elsinore	89	6S/5W-1	Feb. 1952	B	DWR	338
Santa Ana River near Arlington	51	2S/6W-25	Jan. 1951	M	DWR	339, 371, 397
Santa Ana River near Mentone	51b	1S/2W-4	April 1951	M	DWR	340, 397
Santa Ana River near Norco	51e	2S/7W-36	April 1951	M	DWR	341, 371, 397
Santa Ana River below Prado Dam	51a	3S/7W-29	April 1951	M	DWR	342, 371, 397
Warm Creek at Colton	50b	1S/4W-21	April 1951	M (TID)	CSB	343, 344, 345, 371, 397
Warm Creek at San Bernardino	50c	1S/4W-15	April 1951	M	CSB	346

a Location is referenced to San Bernardino Base and Meridian

b Beginning of record

c M-Monthly, B-Bimonthly, TID-Three times each day

d DWR-Department of Water Resources; CSB-City of San Bernardino



TABLE R-9
SAMPLING STATION DATA AND INDEX
SAN DIEGO REGION (NO. 9)

Station	Station Number	Location ^a	Period of Record ^b	Frequency of Sampling ^c	Sampled by ^d	Analysis on page
Escondido Creek at Harmony Grove	63	12S/2W-30	March 1951			347, 373, 399
Forester Creek at Mission Gorge Road	65a	15S/1W-28	March 1954			348
San Diego River at Mission Gorge Road	65c	16S/7W-35	July 1962			349, 399
San Diego River at Old Mission Dam	65	15S/2W-25	April 1951			350, 373, 399
San Dieguito River near San Pasqual	64	13S/2W-1	April 1951			Dry in 1962 - 351
San Luis Rey River near Pala	62	9S/2W-36	March 1951			352
Santa Margarita River near Fallbrook	51c	9S/4W-12	Feb. 1951			353
Spring Valley Creek near La Pressa	65b	17S/1W-17	March 1958			354, 399
Tia Juana River at International Boundary	66	19S/2W-1	April 1951			Dry in 1962 - 355

- a Location is referenced to San Bernardino Base and Meridian
b Beginning of record
c All stations sampled bimonthly
d All stations sampled by Department of Water Resources

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

ANTELOPE CREEK NEAR TENUANT (STA. 1e)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by	
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Total ppm
1/8 1505	14	36	10.9	79	59	7.1 7.8	0.48 ^c	2.5 0.11		0 0.00	34 0.56		1.2 0.03			0.0			19	24	0	1	USGS	
2/7	NOT SAMPLED	--	ROADS IMPASSABLE																					
3/7	NOT SAMPLED	--	ROADS IMPASSABLE																					
4/4 1500	22	44	10.1	82	54	7.2 7.4	0.44 ^c	2.6 0.11		0 0.00	31 0.51		0.8 0.02			0.0			20	22	0	1		
5/15 1035	84	40	10.7	82	43	7.2 7.6	0.26	2.6 0.11	0.5 0.01	0 0.00	25 0.41	1.0 0.02	1.8 0.05	0.1 0.00	0.1 0.01		22		46 ^f	24	17	0	3	
6/12 1235	109	47	9.9	84	37	7.3 7.5	0.28 ^c	2.3 0.10		0 0.00	21 0.34		0.5 0.01			0.1			26	14	0	2		
7/5 1435	53	55	9.3	88	47	7.3 7.5	0.36 ^c	3.0 0.13		0 0.00	26 0.43		0.8 0.02			0.0			27	18	0	2		
8/13 1530	15	60	8.3	83	60	7.4 7.6	0.45 ^c	3.2 0.14		0 0.00	36 0.59		1.5 0.04			0.0			24	22	0	1		
9/12 1345	11.7	65	8.8	93	61	7.4 7.5	0.31	3.9 0.17	0.8 0.02	0 0.00	36 0.59	0.6 0.01	0.8 0.02	1.5 0.02	0.0 0.00	0.0	22		62 ^f 58g	27	22	0		
10/3 1445	27	49	9.3	81	62	7.3 7.6	0.48 ^c	4.2 0.18		0 0.00	38 0.62		1.0 0.03			0.0			27	24	0	2		
11/14 1445	38	40	11.1	85	53	7.2 7.6	0.39 ^c	2.6 0.11		0 0.00	31 0.51		2.2 0.06			0.0			22	20	0	1		
12/11 1140	35	36	11.8	86	55	7.3 7.4	0.43 ^c	2.9 0.13		0 0.00	32 0.52		0.2 0.01			0.0			23	22	0	2		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Teminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-30

- 24 -

Laboratory pH

Sum of calcium and magnesium in epm.

0.0 except as shown.

Derived from conductivity vs TDS curves. $f = 0.656$

^f Determined by addition of analyzed constituents.

a Gravimetric determination.

g. Gravimetric determination.

h. Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

^a Annual median and range, respectively. Calculated from analyses of water quality monitoring made by California Department of Water Resources (CDWR).
^b Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LDBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

BUTTE CREEK NEAR MACDOEL (STA. 1d)

Date and time sampled P.S.T.	Discharge in cfs Est. by Sampler	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by	
			ppm	% Sat			equivalents																	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- tro- gen (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents
1/8 1415	8	33	11.7	81	70	7.1 7.7	0.60 ^c	3.3 0.14		0 0.00	4.0 0.66		1.2 0.03			0.0			19	30	0	2	USGS	
2/7	NOT SAMPLED				ROADS IMPASSABLE																			
3/7 1450	10	33	11.5	80	69	7.1 7.7	0.48 ^c	3.7 0.16		0 0.00	4.0 0.66		0.0 0.00			0.3			25	24	0	5		
4/4 1505	25	55	8.9	84	67	7.3 7.4	0.52 ^c	3.3 0.14		0 0.00	2.8 0.62		0.9 0.03			0.0			21	26	0	10		
5/15 1145	35	51	9.6	86	61	7.3 7.4	6.8 0.34	1.5 0.12	3.7 0.16	1.0 0.03	0 0.00	3.2 0.52	3.0 0.06	1.0 0.03	0.2 0.00	0.2 0.01	0.0	2.5 PO ₄ 0.00	58 ^f	25	23	0	6	
6/12 1330	35	67	8.0	86	61	7.5 7.5	0.48 ^c	3.3 0.14		0 0.00	3.5 0.57		0.8 0.02			0.1			23	24	0	3		
7/5 1535	12	71	8.4	94	71	7.9 7.7	0.52 ^c	4.2 0.18		0 0.00	4.2 0.69		0.4 0.01			0.0			26	26	0	2		
8/13 1645	4	72	8.4	95	101	8.2 7.9	0.76 ^c	6.1 0.27		0 0.00	6.1 1.03		0.9 0.03			0.0			26	39	0	3		
9/12 1450	1.5	62	9.3	95	77	7.9 8.1	7.2 0.36	2.3 0.19	5.5 0.24	0.7 0.02	0 0.00	4.7 0.77	0.6 0.01	0.2 0.01	0.5 0.01	0.1 0.01	0.0	1.5 PO ₄ 0.00	55 ^f 69 ^g	30	28	0	2	
10/3 1600	5	57	9.3	89	75	7.9 7.6	0.54 ^c	4.7 0.20		0 0.00	4.4 0.72		1.0 0.03			0.0			27	27	0	3		
11/14 1540	15	41	11.4	89	61	7.1 7.5	0.43 ^c	3.4 0.15		0 0.00	3.6 0.59		0.4 0.01			0.0			26	22	0	5		
12/11 1250	20	34	12.4	87	69	7.3 7.3	0.53 ^c	4.0 0.17		0 0.00	4.0 0.66		0.8 0.02			0.0			24	26	0	3		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DMR); as indicated.

TABLE 3-10
ANALYSES OF SURFACE WATER
NORTH COASTAL REGION (NO. 1)
EEL RIVER NEAR DOS RIOS (STA. 5d)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by		
			ppm	%Sat			equivalents																		
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents	
1/8 1315	90	44	11.4	93	201	7.7 8.1	1.80 ^c	5.9 0.26		0 0.00	102 1.67		5.2 0.15				0.3				13	90	6	1	USGS
2/5 1050	75	44	11.3	92	197	7.5 8.2	1.70 ^c	7.1 0.31		0 0.00	98 1.61		5.7 0.16				0.0				15	85	5	4	
3/5 1145	3,730	45	11.7	97	100	7.3 7.7	0.90 ^c	3.5 0.15		0 0.00	50 0.82		2.5 0.07				0.1				14	45	4	40	
4/2 1140	1,590	54	10.5	97	128	7.5 7.9	1.10 ^c	3.2 0.17		0 0.00	66 1.03		1.6 0.05				0.2				13	55	1	15	
5/10 0810	104	59	11.9	117	201	8.2 8.1	2.3 1.15	7.0 0.30	8.4 0.69	0 0.00	106 1.74	14 0.29	3.2 0.09	0.0 0.00	0.1 0.01		0.2	12	PO ₄ 0.05	121 ^f	14	92	5	4	
6/6 1340	36	74	10.2	119	223	8.4 8.4	2.04 ^c	7.9 0.34		5 0.17	110 1.80		4.0 0.11				0.2		Tot. Alk. 120		14	102	4	2	
7/10 1138	8.8	77	10.6	126	247	8.4 8.2	2.19 ^c	9.7 0.42		0 0.00	127 2.03		5.6 0.16				0.3				16	109	5	1	
8/8 1715	5.7	62	8.3	85	241	8.2 8.3	2.00 ^c	12 0.52		1 0.03	119 1.95		6.6 0.19				0.4		Tot. Alk. 121		21	100	1	5	
9/12 1550	4.2	73	9.8	113	226	7.2 8.3	2.2 1.10	12 0.52	8.8 0.72	6 0.20	96 1.57	16 0.33	7.0 0.20	0.0 0.00	0.1 0.01		0.5	13	PO ₄ 0.10 Tot. Alk. 108	135 ^f 145 ^g	22	91	2	2	
10/10 0845		61	8.8	89	227	7.8 7.7	1.92 ^c	9.2 0.40		0 0.00	107 1.75		7.0 0.20				0.4				17	96	8	80	
11/14 1630	100	52	10.6	96	239	8.0 8.1	2.12 ^c	8.5 0.37		0 0.00	132 2.16		5.1 0.14				0.1				15	106	0	1	
12/11 1630	455	48	10.9	94	165	7.4 8.1	1.45 ^c	5.8 0.25		0 0.00	91 1.49		2.8 0.08				0.2				15	73	0	20	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in egm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE E-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

EEL RIVER NEAR MCCANN (STA. 5)

Date and time sampled P.S.T.	Discharges in cfs Not Paved	Temp in °F	Dissolved oxygen		Specific conductance (microhm-cm at 25°C)	pH a/b	Mineral constituents in equivalents per million											Total dissolved solids in ppm	Per-cent sodium in ppm	Hardness as CaCO ₃ Total in ppm	Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ¹
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)						
1/9 1030		44	10.8	88	189	7.4 8.0	1.74 ^c	4.5 0.20		0 0.00	92 1.51		4.2 0.12					0.1		87	12	1	USGS
2/5 1425		47	11.5	97	174	7.5 7.9	1.82 ^c	5.0 0.22		0 0.00	90 1.48		4.0 0.11					0.1		81	7	40	
3/5 1535		46	11.6	97	124	7.5 7.9	1.14 ^c	3.0 0.17		0 0.00	62 1.02		2.0 0.06					0.0		57	6	180	
4/2 1500		54	10.6	98	128	7.7 7.9	1.16 ^c	3.3 0.14		0 0.00	67 1.10		2.0 0.06					0.1		58	3	70	
5/9 1030		62	9.3	95	144	7.8 8.0	1.9 0.95	4.4 0.19	0.8 0.02	0 0.00	75 1.23	11 0.23	2.0 0.06	0.0 0.00	0.1 0.01		9.4		88 ^f	64	2	3.5	
6/5 1215		64	9.4	98	174	8.2 8.2	1.58 ^c	4.3 0.19		0 0.00	92 1.51		2.5 0.07					0.1		79	4	2	
7/10 1300		73	9.5	109	232	8.1 8.4	2.14 ^c	6.6 0.29		3 0.10	117 1.92		4.4 0.12				Tot. Alk. 123			107	6	0.6	
8/7 1335		67	7.9	85	247	7.9 8.1	2.20 ^c	7.4 0.32		0 0.00	128 2.10		6.0 0.17					0.1		113	8	1	
9/6 0940		66	8.7	93	265	8.0 8.0	2.0 1.80	7.9 0.34	1.4 0.04	0 0.00	136 2.23	21 0.44	7.0 0.20	0.3 0.00	0.0 0.00		9.0		158 ^f 156 ^g	122	10	4	
10/9 1210		63	9.6	99	264	7.9 8.0	2.10 ^c	7.7 0.33		0 0.00	129 2.11		8.5 0.24					0.1		120	14	3	
11/6 1445		58	9.2	89	231	7.8 8.3	2.22 ^c	6.5 0.28		4 0.13	120 1.97		5.0 0.14				Tot. Alk. 128			111	6	1	
12/4 1310		51	11.4	102	119	7.5 7.6	1.12 ^c	3.0 0.17		0 0.00	65 1.07		1.8 0.05					0.1		56	3	160	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in gpm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH), Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR); as indicated.

TABLE B-10
ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

EEL RIVER AT SCOTIA (SEA - 6)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by	
			ppm	%Sat			equivalents per million																
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Barium (Ba)
1/9 1140	1,580	47	10.6	90	204	7.4 7.9	180 ^c	6.3 0.27	6.3 0.27	0	102 1.67		6.2 0.17			0.1			90	6	1	Maximum 620.	USGS
2/5 1535	2,860	50	11.4	101	178	7.7 8.1	180 ^c	6.0 0.26	6.0 0.26	0	92 1.51		4.7 0.13			0.1			80	5	4	Minimum 0.06	
3/5 1640	28,000	47	11.2	95	112	7.3 7.5	90 ^c	4.6 0.20	4.6 0.20	0	51 0.84		3.2 0.09			0.1			48	6	55	Median 6.2	
4/2 1605	8,730	53	10.7	98	139	7.5 8.0	125 ^c	4.0 0.17	4.0 0.17	0	74 1.21		2.5 0.07			0.0			63	2	50		
5/8 1730	2,450	64	9.3	97	170	7.2 8.1	21 1.05	6.0 0.49	1.0 0.03	86 1.41		11 0.23	3.7 0.10	0.0 0.00	0.0 0.00	0.0	15	PO ₄ 0.00 As 0.00 ABS 0.0	77	6	13		
6/5 1530	1,010	67	9.5	102	200	8.1 8.2	180 ^c	5.7 0.25	5.7 0.25	0	106 1.74		3.5 0.10			0.1			90	3	2		
7/10 1625	244	74	11.6	135	258	8.4 8.7	238 ^c	8.4 0.37	8.4 0.37	4 0.13	134 2.20		6.4 0.18			0.1		Tot. Alk. 142	119	3	1		
8/8 1100	240	67	8.5	91	285	8.1 8.2	265 ^c	2.7 0.42	2.7 0.42	0	158 2.59		2.6 0.27			0.1			132	2	1		
9/6 1230	108	65	11.7	123	294	8.3 8.4	37 1.65	11 0.89	1.1 0.03	4 0.13	158 2.59	12 0.25	7.2 0.22	0.3 0.00	0.0 0.00	0.0	10	PO ₄ 0.20 As 0.00 ABS 0.0 Tot. Alk. 166	137	1	2		
10/10 0915	3,160	59	9.3	91	231	7.6 8.0	200 ^c	10 0.44	10 0.44	0	109 1.79		6.5 0.18			0.1			100	11	170		
11/7 0940	1,040	55	7.5	71	232	7.7 7.9	216 ^c	7.3 0.32	7.3 0.32	0	121 1.98		4.8 0.14			0.2			108	9	1		
12/4 1425	36,200	53	10.9	100	116	7.3 7.7	100 ^c	5.7 0.25	5.7 0.25	0	61 1.00		1.8 0.05			0.1			53	3	320		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0, except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

EEL RIVER, MIDDLE FORK AT DOS RIOS (STA. 5c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million											Total dis- solved solids in ppm	Per- cent calcium sulfate	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- sum (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)						
1/8 1400	540	42	11.5	91	7.5 7.9	1.43 ^c		3.3 0.14		0 0.00	75 1.23		3.2 0.09			0.2			71	9	1	USGS
2/5 1115	646	43	11.5	93	7.5 8.0	1.34 ^c		4.1 0.18		0 0.00	74 1.21		2.6 0.07			0.1			67	6	4	
3/5 1115	2,930	44	12.0	98	7.5 7.9	1.30 ^c		3.8 0.17		0 0.00	73 1.20		1.5 0.04			0.0			68	8	120	
4/2 1115	3,750	48	11.3	97	7.5 7.9	1.04 ^c		2.4 0.10		0 0.00	58 0.95		1.4 0.04			0.0			52	4	60	
5/10 0715	1,010	53	11.8	108	7.9 7.8	1.4 0.70	3.0 0.32	3.0 0.13	0.6 0.02	0 0.00	59 0.97	6.0 0.12	1.2 0.03	0.2 0.00	0.1 0.01	0.0	8.6 PO ₄ 0.10 As 0.01 ABS 0.0	51	3	10		
6/6 1415	437	68	10.4	113	8.0 8.0	1.30 ^c		3.6 0.16		0 0.00	73 1.20		2.2 0.06			0.0			65	5	2	
7/10 1210	56	77	9.8	117	8.2 8.2	2.14 ^c		7.1 0.31		0 0.00	115 1.88		7.0 0.20			0.2			107	13	1	
8/8 1745	26	62	8.2	84	8.4 8.5	2.32 ^c		12 0.52		6 0.20	110 1.80		1.4 0.39			0.1	Tot. Alk. 122	116	16	5		
9/12 1640	10	73	10.1	116	8.1 8.4	1.75	9.1 0.75	13 0.57	1.1 0.03	5 0.17	111 1.82	30 0.62	18 0.51	0.2 0.00	0.1 0.01	0.2	2.0 PO ₄ 0.00 As 0.00 ABS 0.0 Tot. Alk. 121	125	26	10		
10/10 0930		61	9.5	96	7.9 7.6	2.44 ^c		11 0.48		0 0.00	121 1.98		33 0.93			0.1			122	23	400	
11/14 1700	280	51	11.1	99	7.6 8.1	1.50 ^c		4.5 0.20		0 0.00	92 1.51		4.9 0.14			0.0			78	3	1	
12/11 1650	1,050	45	11.5	95	7.2 8.1	1.17 ^c		4.0 0.17		0 0.00	86 1.41		2.6 0.07			0.0			73	2	15	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-10
ANALYSES OF SURFACE WATER
NORTH COASTAL REGION (NO. 1)

EEL RIVER, SOUTH FORK NEAR MIRANDA (STA. 7)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25° C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ	
			ppm	% Sat			equivalents per million																	
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
1/8 1630	412	48	11.6	100	162	7.3 8.0	1.39 ^c		5.9 0.26		0.00	81 1.33		5.3 0.15			0.0	0.0			1	Maximum 230.	USGS	
2/5 1335	680	49	11.3	98	152	7.5 8.0	1.25 ^c		6.8 0.30		0.00	79 1.29		5.7 0.16			0.1	0.1			4	Minimum 0.23		
3/5 1445	6,450	47	11.0	93	96	7.3 7.6	0.82 ^c		4.4 0.19		0.00	46 0.75		3.5 0.10			0.0	0.0			3	Median 6.2		
4/2 1415	1,110	56	10.3	98	135	7.5 7.8	1.06 ^c		5.4 0.23		0.00	71 1.16		4.0 0.11			0.0	0.0			0			
5/9 1200	556	62	9.8	100	169	7.7 8.1	0.90	6.6 0.54	7.4 0.32	0.8 0.02	0.00	88 1.44	9.0 0.19	6.5 0.18	0.0 0.00	0.1 0.01	0.0	0.1		PO ₄ 0.05	105 ^f	18		
6/5 1350	45	67	10.4	112	190	8.1 8.2	1.76 ^c		7.6 0.33		0.00	103 1.69		4.8 0.14			0.0	0.0			1			
7/10 1435	110	75	10.3	120	217	8.2 8.2	1.92 ^c		8.9 0.39		0.00	120 1.97		8.4 0.24			0.1	0.1			1			
8/7 1455	76	69	8.3	91	216	8.2 8.2	1.92 ^c		9.9 0.43		0.00	123 2.02		6.0 0.17			0.0	0.0			1			
9/6 1040		67	8.8	95	238	8.1 8.4	2.6 1.30	2.0 0.74	11 0.48	1.0 0.03	4 0.13	126 2.07	0.2 0.19	8.6 0.24	0.1 0.00	0.1 0.01	0.0	8.4	PO ₄ 0.00 Tot. Alk. 134	139 ^f 140 ^g	19			
10/9 1415	500 (est.)	63	9.3	96	228	7.6 7.9	2.03 ^c		10 0.44		0.00	125 2.05		9.2 0.26			0.0	0.0			35			
11/6 1320	340	58	9.6	93	183	7.7 7.8	1.54 ^c		7.4 0.32		0.00	98 1.61		4.5 0.13			0.2	0.2			1			
12/4 1120	8,210	53	11.1	102	101	7.5 7.8	0.80 ^c		5.4 0.23		0.00	53 0.87		3.4 0.10			0.0	0.0			180			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (ITLI); or California Department of Water Resources (DWR); as indicated.

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

GUALALA RIVER, SOUTH FORK NEAR ANNAPOLIS (STA. 9A)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 0.98 Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃ in ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ^j
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fates (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)	Other constituents			
1962																					
1/8 1652	50	48	10.7	92	228	7.3	1.98 ^c	10.44	0.44	0	0.00	116	1.90	0	0.00	8.0	0.23				
2/14 1100	4000	51	9.8	88	109	7.1	0.86 ^c	5.8	0.25	0	0.00	52	0.85	0	0.00	5.0	0.14				
3/7 0745	2800	49	10.5	91	121	7.4	0.99 ^c	5.9	0.26	0	0.00	61	1.00	0	0.00	5.0	0.14				
4/11 0830	110	54	8.8	82	220	7.5	1.86 ^c	11.48	0.48	0	0.00	116	1.90	0	0.00	7.0	0.20				
5/8 1550	72	63	10.8	111	245	8.0	1.20	12.32	0.32	0	0.00	129	2.11	0	0.00	6.8	0.19	PO ₄	0.10		
6/5 1428	23	67	8.7	94	246	7.2	2.14 ^c	11.48	0.48	0	0.00	132	2.16	0	0.00	6.0	0.17				
7/9 1358	20	70	10.8	120	268	7.6	2.22 ^c	13.37	0.37	0	0.00	138	2.26	0	0.00	9.3	0.26				
8/7 1655	10	63	9.0	93	273	7.6	2.25 ^c	14.61	0.61	0	0.00	152	2.49	0	0.00	9.6	0.27				
9/11 1020	5.2	70	13.4	149	272	7.3	1.30	13.37	0.37	0	0.00	152	2.49	0	0.00	9.0	0.25	PO ₄	1.3		
10/9 0915	9.1	62	6.1	62	280	7.2	2.37 ^c	14.61	0.61	0	0.00	159	2.61	0	0.00	12	0.34				
11/13 1440	35	56	10.1	96	270	7.6	2.28 ^c	12.32	0.32	0	0.00	152	2.49	0	0.00	7.2	0.20				
12/10 1500	52	49	10.8	94	226	7.4	1.93 ^c	10.44	0.44	0	0.00	124	2.03	0	0.00	6.6	0.19				

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{VI}), reported here as $\frac{0.0}{0.00}$ except as shown.e Derived from conductivity vs TDS curves. $F = 0.600$

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 4-10
ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE (STA. 1c)

Date and time sampled P.S.T.	Discharge in cfs Not Rated	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Per- cent sodium	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by			
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents
1/9 1105		39	11.9	90	268	7.7 7.8	1.76 ^c		24 1.04		0 0.00	122 2.00		8.6 0.24			0.1			89	0	10		USGS	
2/8 0835		41	11.5	90	220	7.5 7.9	1.58 ^c		16 0.70		0 0.00	114 1.87		6.5 0.18			0.1			79	0	50			
3/8 0820		42	11.4	90	237	7.7 7.9	1.60 ^c		17 0.74		0 0.00	119 1.95		5.5 0.16			0.1			90	0	30			
4/5 0730		50	10.1	89	281	7.7 7.7	2.00 ^c		20 0.87		0 0.00	118 1.93		6.4 0.18			0.0			100	3	15			
5/16 1430		59	11.0	108	277	8.1 8.0	1.9 0.95	11 0.89	23 1.00	2.9 0.07	0 0.00	114 1.87	39 0.81	8.5 0.24	0.6 0.01	0.2 0.01	0.2	26	PO ₄ 0.20	92	0	7			
6/13 1345		66	9.0	96	249	8.3 8.3	1.66 ^c		19 0.83		5 0.17	99 1.62		7.0 0.20			0.1		Tot. Alk. 102	83	0	3			
7/6 1145		72	9.7	110	253	8.3 8.1	1.69 ^c		21 0.91		0 0.00	112 1.84		7.4 0.21			0.2			84	0	1			
8/14 1130		72	8.8	100	225	8.4 8.4	1.50 ^c		18 0.78		4 0.13	107 1.75		6.8 0.19	0.5 0.01		0.2		Tot. Alk. 115 PO ₄ 0.20	75	0	3			
9/13 1030		67	10.3	111	227	8.3 7.2	1.6 0.80	2.2 0.76	20 0.87	2.8 0.07	0 0.00	116 1.90	15 0.31	5.7 0.16	1.6 0.03	0.1 0.01	0.1	20	PO ₄ 0.50	78	0	3			
10/4 1120		61	9.9	100	226	8.1 7.9	1.50 ^c		18 0.78		0 0.00	120 1.97		7.5 0.21	2.7 0.04		0.1		PO ₄ 0.35	75	0	4			
11/15 1110		50	10.6	94	247	7.6 8.0	1.59 ^c		21 0.91		0 0.00	124 2.03		6.9 0.19	2.4 0.04		0.1		PO ₄ 0.25	80	0	15			
12/12 1145		43	11.7	94	264	7.7 8.0	1.72 ^c		22 0.96		0 0.00	122 2.00		7.0 0.20	1.4 0.02		0.2		PO ₄ 0.25	86	0	25			

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in gpm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-10
ANALYSES OF SURFACE WATER
NORTH COASTAL REGION (NO. 1)

KILMATH RIVER BELOW IRON GATE DAM (STA. 147)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (microhmhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by i	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)
1/9 0930	2,200	38	10.4	78	234	7.1 7.4	140 ^c		24 1.04		0 0.00	48 1.61		5.3 0.15			0.1			0	10	Maximum 2,400.	USGS
2/1 1110	1,640	38	10.0	75	169	7.2 8.1	101 ^c		16 0.70		0 0.00	79 1.29		4.5 0.13			0.2			0	4	Minimum 0.6	
3/7 0955	1,630	40	9.5	73	181	7.2 7.8	120 ^c		15 0.65		0 0.00	82 1.34		3.5 0.10		0.2			0	20	Median 6.2		
4/4 0940	2,430	48	10.0	86	280	7.5 7.7	184 ^c		23 1.00		0 0.00	103 1.69		4.9 0.14		0.1			8	15			
5/16 0940	1,730	58	8.1	86	263	7.7 7.8	15 0.75	10 0.85	22 0.96	3.4 0.09	0 0.00	84 1.38	51 1.00	6.5 0.18	1.1 0.02		0.1	24 As 0.00	11	4			
6/13 0915	876	63	9.7	100	243	8.0 7.7	188 ^c		21 0.91		0 0.00	90 1.48		6.2 0.17		0.2			0	2			
7/6 0955	668	68	9.4	102	237	7.9 7.8	145 ^c		20 0.87		0 0.00	27 1.59		4.8 0.14		0.1			0	2			
8/14 0935	951	69	8.1	84	191	7.3 7.4	122 ^c		17 0.74		0 0.00	90 1.48		3.7 0.11		0.1		PO ₄ 0.45	0	1			
9/13 0830	1,25	67	7.5	81	148	7.7 7.7	14 0.70	7.1 0.58	17 0.74	2.6 0.07	0 0.00	94 1.34	17 0.35	5.6 0.16	1.5 0.02	0.0 0.00	0.0	17 As 0.01	0	5			
10/4 0945	1,610	64	7.7	80	189	7.6 7.5	124 ^c		16 0.70		0 0.00	94 1.54		5.0 0.14	2.4 0.04		0.1	PO ₄ 0.25	0	4			
11/15 0945	2,340	53	9.1	83	227	7.3 7.5	136 ^c		21 0.91		0 0.00	108 1.77		5.4 0.15	4.1 0.07		0.0	PO ₄ 0.20	0	4			
12/12 1000	3,270	43	11.2	90	238	7.3 7.9	134 ^c		23 1.00		0 0.00	96 1.57		6.2 0.17	1.4 0.02		0.1	PO ₄ 0.20	0	20			

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-10
ANALYSES OF SURFACE WATER
NORTH COASTAL REGION (NO. 1)

KIAMATH RIVER NEAR KIAMATH (STA. 3)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in equivalents per million								Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃ in ppm		Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ			
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)			Nitrate (NO ₃)	Fluoride (F)				Boron (B)	Silica (SiO ₂)	Other constituents
1/9 1640	8,380	44	11.0	89	161	7.3 8.1	1.32 ^c	6.6 0.29		0.00	80 1.31		3.7 0.10			0.1			66	0	3	Maximum 7,000.4	USGS	
2/6 1425	8,380	49	12.1	105	156	7.5 7.7	1.32 ^c	6.7 0.29		0.00	82 1.34		2.0 0.06			0.2			66	0	4	Minimum 0.045-		
3/6 1335	25,700	46	11.6	97	127	7.3 8.0	1.12 ^c	3.6 0.16		0.00	66 1.08		2.2 0.06			0.0			56	2	30	Median 6.2		
4/3 1305	25,100	52	11.0	100	125	7.5 7.8	1.08 ^c	3.7 0.16		0.00	66 1.08		1.7 0.05			0.0			54	0	25			
5/10 0750	15,700	54	10.6	98	114	7.3 7.9	0.95	4.1 0.18	0.7 0.02	0.00	58 0.95	9.2 0.19	1.6 0.05	0.0 0.00	0.1 0.01	0.0	14 As 0.00	PO ₄ 1.6 ABS 0.0	75 ^f	16	13			
6/6 1300	8,070	61	9.7	98	135	7.4 8.0	1.14 ^c	5.4 0.23		0.00	70 1.15		2.2 0.06			0.0			57	0	2			
7/11 1220	3,530	71	9.3	104	167	7.2 8.1	1.40 ^c	6.8 0.30		0.00	86 1.41		4.0 0.11			0.0			70	0	1			
8/9 1020	5,250	67	8.2	88	163	7.5 7.6	1.33 ^c	7.2 0.34		0.00	82 1.34		5.4 0.15			0.1			67	0	15			
9/7 1140	2,930	69	8.7	96	194	8.0 7.7	0.95	7.3 0.60	1.5 0.04	0.00	102 1.67	13 0.27	5.1 0.14	0.3 0.00	0.0 0.00	0.0	15 As 0.00	PO ₄ 0.05 ABS 0.0	121 ^f 121 ^g	22	10			
10/11 1140	27,900	55	10.6	100	99	7.4 7.5	0.88 ^c	3.3 0.14		0.00	22 0.85		2.0 0.06			0.0			44	1	45			
11/8 1030	6,720	53	10.9	100	192	7.5 8.0	1.40 ^c	11 0.46		0.00	102 1.67		5.1 0.14			0.0			74	0	5			
12/5 1300	50,400	50	11.7	104	123	7.5 7.7	1.08 ^c	5.4 0.23		0.00	68 1.11		2.8 0.08			0.1			54	0	70			

a Field pH.

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE R-10

KLAMATH RIVER NEAR SEIAD VALLEY (STA. 2b)

 σ Field pH.

Sum of calcium and magnesium in epm.

Derived from conductivity vs TDS curves

පරිසරයේ සිදුවන වෙනස්කම් හේතු වන පරිසරයේ වෙනස්කම්

Annual median and range, respectively. Calculated from analyses of duplicate nominal samples made by Environmental Protection Agency (EPA) personnel. Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBOPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE P-10
ANALYSES OF SURFACE WATER
NORTH COASTAL REGION (NO. 1)

KLAMATH RIVER AT SOMESEAR (STA. 2)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C) a/b	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ			
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents
1/10 1310	5,200	41	12.3	96	7.3 7.9	1.37 ^c		12 0.52		0 0.00	86 1.41		4.8 0.14			0.1			28	69	0	2	Maximum 230.	USGS
2/8 1145	16,960	44	12.2	99	7.3 7.8	0.98 ^c		4.8 0.21		0 0.00	62 1.02		2.8 0.08			0.1			18	49	0	60	Minimum 1.3	
3/8 1310	8,630	46	12.1	102	7.5 8.0	1.40 ^c		6.5 0.28		0 0.00	84 1.38		2.5 0.07			0.0			17	70	1	10	Median 23.	
4/5 1030	13,820	50	11.4	101	7.6 7.8	1.12 ^c		5.7 0.25		0 0.00	70 1.15		2.5 0.07			0.0			18	56	0	15		
5/8 1140	10,200	55	10.9	103	7.5 7.9	10 0.50	4.6 0.38	5.0 0.22	0.2 0.02	0 0.00	54 0.89	9.0 0.19	1.8 0.05	0.0 0.00	0.1 0.01	0.0	1.3 0.00	PO ₄ 0.00 As 0.00 ABS 0.0	71 ^f	44	0	9		
6/4 1430	5,520	58	10.1	98	7.2 7.9	1.12 ^c		6.8 0.30		0 0.00	67 1.10		3.0 0.08			0.0			21	56	1	2		
7/9 1445	1,900	73	8.2	94	8.1 8.2	1.38 ^c		9.2 0.40		0 0.00	82 1.46		4.1 0.12			0.1			22	69	0	0.7		
8/6 1400	1,730	70	8.8	98	8.2 8.0	1.57 ^c		13 0.57		0 0.00	97 1.59		5.0 0.14			0.1			27	78	0	2		
9/4 1440	1,850	73	8.9	102	8.2 8.0	16 0.80	8.8 0.72	13 0.57	2.0 0.05	0 0.00	103 1.69	13 0.27	6.4 0.18	0.7 0.01	0.0 0.00	0.0	20 0.00	PO ₄ 0.15 As 0.00 ABS 0.0	131 ^f 129 ^g	76	0	15		
10/8 1325	4,140	58	10.6	103	7.8 7.8	1.34 ^c		11 0.46		0 0.00	93 1.52		5.2 0.15			0.1			26	67	0	8		
11/5 1345	4,380	56	7.7	73	7.9 8.1	1.40 ^c		14 0.61		0 0.00	102 1.67		5.9 0.17			0.0			30	70	0	5		
12/3 1250	59,100	48	12.5	108	7.3 7.5	0.88 ^c		3.7 0.16		0 0.00	50 0.82		1.0 0.03			0.0			15	44	3	180		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in eqm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USER); United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

MAD RIVER NEAR ARCATA (SEA. 6a)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (microhm-cm at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform MPN/ml	Analyzed by ^h			
							equivalents												Silica (SiO ₂)	Other constituents						
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)								Boron (B)		
1/10 0950	396	43	10.4	84	137	7.2 7.8	1.25 ^c		3.1 0.13		0 0.00	62 1.13		3.1 0.09			0.0			9	63	6	7	Maximum 620.	USGS	
2/6 1215	296	50	10.9	96	150	7.3 7.9	1.36 ^c		4.3 0.19		0 0.00	75 1.23		5.0 0.14			0.0			12	68	6	3	Minimum 0.62		
3/6 1115	5,500	46	12.0	101	81	7.2 7.8	0.71 ^c		2.8 0.12		0 0.00	38 0.62		2.6 0.07			0.1			14	35	4	80	Median 22.		
4/3 1100	1,660	52	11.1	101	94	7.3 7.5	0.82 ^c		2.5 0.11		0 0.00	49 0.86		1.8 0.05			0.0			12	41	1	55			
5/10 1010	802	57	10.3	99	117	7.4 7.8	1.5 0.75	3.0 0.25	3.2 0.17	1.0 0.03	0 0.00	58 0.95	8.8 0.18	3.6 0.10	0.0 0.00		0.2 0.01	0.0	6.2	PO ₄ 0.00 As 0.01	14 ^f	50	2	40		
6/6 1000	100	61	9.5	90	177	7.3 8.0	1.62 ^c		4.7 0.20		0 0.00	91 1.49		3.2 0.09			0.2 0.01		0.2		11	81	6	2		
7/11 0745	30	63	8.3	86	229	7.4 8.2	2.20 ^c		5.8 0.25		0 0.00	128 2.10		7.0 0.20			0.0			10	110	5	2			
8/8 0915	110	63	7.4	70	228	7.4 7.9	2.12 ^c		6.4 0.28		0 0.00	125 2.05		4.5 0.13			0.0			12	106	4	1			
9/5 1130	35	62	9.3	95	251	7.5 8.3	3.7 1.85	6.0 0.49	6.1 0.27	0.2 0.02	2 0.07	134 2.20	14 0.29	5.1 0.14	0.2 0.00	0.0 0.00	0.0	1.0	PO ₄ 0.00 As 0.00 ABS 0.0 Tot. Alk. 1.30	14 ^f	117	3	2			
10/10 1350	5,070	58	10.1	98	99	7.2 7.2	0.83 ^c		5.4 0.23		0 0.00	32 0.64		4.7 0.13			0.1			22	42	10	60			
11/7 1630	400	53	10.4	95	142	7.3 7.8	1.28 ^c		4.1 0.18		0 0.00	84 1.36		2.2 0.06			0.1			12	63	0	4			
12/5 1000	3,730	50	11.3	100	99	7.3 7.5	0.90 ^c		4.2 0.18		0 0.00	50 0.82		2.8 0.08			0.1			17	45	4	100			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE E-10
ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

MATTOLE RIVER NEAR PETROLIA (STA. 7a.)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform MPN/ml	Analyzed by ¹	
			ppm	% Sat			equivalents																	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents
1/8 1825	440	49	10.7	93	167	7.6 7.9	141 ^c	5.4 0.23	73 1.20	0 0.00	0 0.00	0 0.00	0 0.00	5.0 0.14				0.0		70	10	2	Maximum 7,000.†	USGS
2/6 0935	638	50	10.7	95	152	7.2 7.7	124 ^c	6.3 0.27	67 1.10	0 0.00	0 0.00	0 0.00	0 0.00	3.8 0.11				0.0		62	7	35	Minimum 0.23	
3/6 0900	7,440	49	11.0	96	99	7.3 7.7	85 ^c	4.5 0.20	42 0.69	0 0.00	0 0.00	0 0.00	0 0.00	3.8 0.11				0.1		40	6	105	Median 13.	
4/3 0900	740	52	10.6	96	138	7.4 7.8	112 ^c	5.4 0.23	64 1.05	0 0.00	0 0.00	0 0.00	0 0.00	3.8 0.11				0.0		56	4	20		
5/9 0830	742	60	9.7	97	169	7.5 8.0	22 1.10	3.6 0.30	76 1.25	0 0.00	0 0.00	14 0.29	4.2 0.12	0.0 0.00	0.2 0.01	0.0	13	PO ₄	102 ^f	70	8	10		
6/5 0930	360	62	9.7	99	195	7.6 8.2	168 ^c	7.4 0.32	95 1.56	0 0.00	0 0.00	0 0.00	3.0 0.08	0.0				0.0		84	6	1		
7/10 1045	125	71	9.8	110	229	7.8 8.2	198 ^c	8.7 0.38	112 1.84	0 0.00	0 0.00	0 0.00	5.3 0.15	0.1				0.1		99	7	1		
8/7 1110	275	66	9.0	96	234	8.0 8.0	208 ^c	9.1 0.40	116 1.90	0 0.00	0 0.00	0 0.00	5.0 0.14	0.0				0.0		104	9	1		
9/5 1435	65	74	10.4	121	250	8.3 8.3	36 1.80	4.7 0.39	115 1.88	4 0.13	25 0.52	2.4 0.15	0.1 0.00	0.1 0.01	0.0	12	PO ₄	154 ^f 153 ^g	110	10	5			
10/9 0950	1,000	62	9.5	97	201	7.5 7.5	170 ^c	8.9 0.39	88 1.44	0 0.00	0 0.00	0 0.00	4.8 0.14	0.0				0.0		85	13	95		
11/6 0850	482	54	8.9	82	191	7.4 7.8	160 ^c	7.3 0.32	98 1.44	0 0.00	0 0.00	0 0.00	5.0 0.14	0.2				0.2		80	8	1		
12/4 0900	4,500	52	11.0	100	110	7.2 7.8	84 ^c	5.4 0.23	51 0.84	0 0.00	0 0.00	0 0.00	3.6 0.10	0.0				0.0		42	0	350		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.
0.00

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

NAVARRO RIVER NEAR NAVARRO (STA. 8B)

Date and time sampled P.S.T.	Discharge in cfs	Temp in of	a = 1.00		Specific conductance (microhmhos at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total N.C. ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁺⁶), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves f = 0.610

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION, (1)

NOYO RIVER NEAR FORT BRAG? (STA. 10C)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 1.00		Specific conductance (micromhos at 25°C)	pH a	Mineral constituents in parts per million								Total dis- solved solids in ppm	Per- cent sed- ium	Hardness as CaCO ₃ ppm	Turb- id- ity in ppm	Coliform ^b MPN/ml	Analyzed by ^c								
			Dissolved oxygen	ppm			°/50°F	equivalents																				
								Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)							Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silico (SiO ₂)	Other constituents		
1962																												
1/9 1230	34	45	11.6	95	156	7.1	1.18 ^c		10 0.44		0 0.00	74 1.21		10 0.28			0.1					107 ^e	27	59	0	1	Median 13	USGS
2/15 0755	1800	51	10.5	94	84	6.8	0.61 ^c		5.9 0.26		0 0.00	46 0.75		6.2 0.17			0.0					58 ^e	30	30	0	1500	Max. 2400	
3/7 1345	1250	50	10.2	90	89	7.3	0.62 ^c		5.9 0.26		0 0.00	39 0.64		5.2 0.15			0.0					61 ^e	30	31	0	55	Min. 0.23	
4/11 1345	68	55	10.0	94	132	7.3	0.96 ^c		8.8 0.38		0 0.00	64 1.05		7.2 0.20			0.0					91 ^e	28	48	0	1		
5/9 1200	38	58	11.1	108	147	7.7	1.4 0.70	4.4 0.36	10 0.44	1.4 0.04	0 0.00	73 1.20	6.0 0.12	6.2 0.17	0.2 0.00	0.1 0.01	0.1	19	PO ₄	0.05		97 ^f	29	53	0	3		
6/6 1010	20	57	11.8	113	157	7.3	1.38 ^c		9.8 0.43		0 0.00	76 1.25		7.5 0.21			0.0					108 ^e	24	69	7	2		
7/10 0835	10	60	10.5	105	166	7.3	1.18 ^c		11 0.48		0 0.00	79 1.29		9.4 0.27			0.2					114 ^e	29	59	0	2		
8/8 1415	40	57	8.0	77	159	7.2	1.11 ^c		11 0.48		0 0.00	76 1.25		9.1 0.26			0.2					109 ^e	30	56	0	5		
9/12 1230	3.5	62	8.1	83	169	6.8	1.5 0.75	5.6 0.46	12 0.52	1.1 0.03	0 0.00	81 1.33	3.2 0.07	11 0.31	0.0 0.00	0.1 0.01	0.2	21	PO ₄	0.10		106 ^g	30	60	0	3		
10/9 1550	51	60	9.0	90	168	7.3	1.26 ^c		12 0.52		0 0.00	87 1.43		9.7 0.27			0.1					116 ^e	29	63	0	5		
11/14 1330	24	50	11.1	98	170	7.3	1.20 ^c		10 0.44		0 0.00	88 1.44		7.5 0.21			0.2					117 ^e	27	60	0	2		
12/11 1345	125	49	11.9	103	134	7.2	0.99 ^c		8.5 0.37		0 0.00	69 1.13		6.2 0.17			0.1					92 ^e	27	50	0	6		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.e Derived from conductivity vs TDS curves. $\pm = 0.687$

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

OUTLET CREEK NEAR LONGVALE (STA. 5b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by		
						equivalents per million																	
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)
1/8 1245	60	44	11.7	95	175	7.6 7.9		6.8 0.30		0 0.00	85 1.39		8.0 0.23			0.5			17	72	2	1	USGS
2/5 1030	95	46	11.5	97	168	7.5 7.9		7.7 0.33		0 0.00	84 1.36		7.5 0.21			0.4			20	68	0	4	
3/5 1200	2,170	45	11.3	93	70	7.1 7.4		2.8 0.12		0 0.00	33 0.54		1.5 0.04			0.0			18	28	1	50	
4/2 1200	160	57	10.2	98	140	7.7 7.9		6.1 0.27		0 0.00	70 1.15		4.4 0.12			0.1			19	58	1	1	
5/10 0850	47	58	10.8	105	200	8.1 8.1	7.2 0.59	9.8 0.43	1.2 0.03	0 0.00	105 1.72	8.0 0.17	7.5 0.21	0.1 0.00	0.1 0.01	0.6	11	PO ₄ 0.10	118 ^f	82	0	3	
6/6 1315	11	63	10.9	112	224	8.4 8.5		11 0.48		6 0.20	110 1.80		8.2 0.23			0.7		Tot. Alk. 122	20	96	0	2	
7/10 1115	2.2	78	9.1	110	279	8.2 8.0		14 0.61		0 0.00	142 2.33		15 0.42			1.4			21	113	0	1	
8/8 1700	4.3	64	9.0	83	307	8.2 8.3		17 0.74		2 0.07	154 2.52		21 0.59			1.2		Tot. Alk. 158	23	124	0	5	
9/12 1515	0.8	74	9.2	107	333	7.7 8.3	14 1.12	19 0.83	1.8 0.05	5 0.17	144 2.36	8.0 0.17	29 0.82	0.6 0.01	0.2 0.01	3.1	11	Tot. Alk. 154 PO ₄ 0.00	193 ^f 1968	131	5	3	
10/10 0810	2,260	60	9.3	93	111	7.6 7.0		4.3 0.19		0 0.00	39 0.64		6.0 0.17			0.2			18	43	11	200	
11/14 1600	45	52	10.7	97	183	7.8 8.1		8.7 0.36		0 0.00	91 1.49		8.8 0.25			0.3			21	73	0	5	
12/11 1545	145	49	10.8	94	142	7.2 8.1		6.4 0.28		0 0.00	74 1.21		4.8 0.14			0.4			19	58	0	5	

a Field pH.

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-10
ANALYSES OF SURFACE WATER
NORTH COASTAL REGION (NO. 1)
REDWOOD CREEK AT ORICK (STA. 36)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen	Specific conductance at 25°C	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent iron in ppm	Hardness as CaCO ₃ Total ppm	Turbidity in nptm	Coliform MPN/ml	Analyzed by
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Polysulfate sum (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Barium (Ba)	Silica (SiO ₂)				
1/9 1962	490	47	10.9	94	7.1 7.4	0.80 ^c	2.7 0.12		0.00	39 0.64		4.6 0.13			0.0		40	8	3	USGS
2/6 1310	890	49	10.8	89	7.2 7.5	0.76 ^c	3.2 0.14		0.00	40 0.66		5.0 0.14			0.0		38	5	100	
3/6 1215	4,020	46	11.5	64	7.1 7.5	0.52 ^c	2.3 0.10		0.00	26 0.43		2.8 0.08			0.0		26	5	200	
4/3 1200	1,110	53	10.7	76	7.2 7.7	0.60 ^c	2.5 0.11		0.00	23 0.38		3.4 0.10			0.0		30	11	45	
5/10 0850	540	54	10.3	90	7.3 7.6	0.65	3.6 0.16	0.6 0.02	0.00	40 0.66	7.2 0.15	3.5 0.10	0.0 0.00	0.2 0.01	0.0	6.2	37	4	35	
6/6 1120	200	62	10.1	112	7.3 7.6	0.92 ^c	3.9 0.17		0.00	52 0.85		4.2 0.12			0.1		46	3	4	
7/11 0935	84	61	9.4	133	7.2 7.9	1.10 ^c	5.6 0.24		0.00	62 1.02		5.5 0.16			0.0		55	4	1	
8/9 0845	411	61	8.8	131	7.2 7.3	1.08 ^c	4.8 0.21		0.00	52 0.85		5.4 0.15			0.1		54	11	35	
9/7 1020	36	59	9.2	141	7.2 7.9	1.00	5.5 0.24	0.4 0.01	0.00	66 1.08	8.6 0.18	7.2 0.20	0.5 0.01	0.1 0.01	0.0	11	58	4	5	
10/11 1000	2,750	56	10.1	82	7.2 7.2	0.67 ^c	3.3 0.14		0.00	33 0.54		4.0 0.11			0.0		34	7	100	
11/8 0920	510	52	10.5	116	7.2 7.9	0.96 ^c	4.5 0.20		0.00	56 0.92		5.4 0.15			0.0		48	2	1	
12/5 1130	3,840	51	11.2	67	7.1 7.0	0.52 ^c	4.6 0.20		0.00	28 0.46		3.5 0.10			0.0		26	3	50	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

RUSSIAN RIVER AT GUERNEVILLE (S.A. 10)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 1.00		Specific conductance (microhmhos at 25°C) a	Mineral constituents in parts per million								Total dissolved solids in ppm	Per cent sodium in ppm	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by ¹						
			ppm	%Sol		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO ₃)	Bicarbonates (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)							Nitrate (NO ₃)	Fluoride (F)	Barium (Ba)	Silica (SiO ₂)	Other constituents	
1962																									
1/8 1420	385	53	10.2	94	295	2.66 ^c		11.048		0.00	149.244		9.90.28			0.4			176 ^e	15	133	11	2	Median 9.6	USGS
2/13 1550	51300	53	9.9	91	82	0.68 ^c		3.50.15		0.00	380.62	2.00.04	2.80.08	1.70.03		0.0			49 ^e	18	34	3	1000	Max. >7000.	
3/6 1345	30300	49	10.3	90	102	0.92 ^c		4.00.17		0.00	510.84		2.80.08			0.1			61 ^e	16	46	4	180	Min. 1.3	
4/10 1410	529	50	10.0	88	292	2.62 ^c		120.52		0.00	1572.37		9.00.25			0.2			174 ^e	17	131	2	2		
5/8 1258	373	65	12.2	128	304	8.0	171.36	110.48	1.60.04	0.00	1622.66	160.33	6.20.17	2.40.04	0.00.00	0.3	17	PO ₄ 0.35	180 ^f	15	138	5	8		
6/5 1217	170	70	10.6	118	305	7.6		100.44		0.00	1662.72		6.20.17			0.2			181 ^e	13	142	6	5		
7/9 1103	123	74	12.0	139	297	8.0		100.44		0.00	1642.69		6.20.17			0.4			176 ^e	14	137	3	20		
8/7 1350	156	70	8.7	97	272	8.1		9.30.40		0.00	1562.36		5.40.15			0.3			162 ^e	14	122	0	10		
9/11 1350	164	71	11.6	131	260	7.2	141.16	8.60.37	1.00.03	0.00	1532.31	100.21	5.00.14	0.30.00	0.10.01	0.3	15	PO ₄ 0.30	143 ^g	13	123	0	6		
10/8 1700	188	68	10.0	109	265	7.9		100.44		30.10	1502.46		9.00.25			0.3		Total Alkalinity: 156	157 ^e	15	120	0	8		
11/13 1230	481	64	10.6	110	269	7.7		9.80.43		0.00	1412.31		7.20.20			0.5			159 ^e	15	118	2	3		
12/10 1210	730	54	9.4	87	258	7.3		9.30.40		0.00	1442.36		6.20.17			0.3			133 ^e	15	116	0	20		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.e Derived from conductivity vs TDS curves $\epsilon = 0.595$

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR); as indicated.

TABLE B-10
ANALYSES OF SURFACE WATER
NORTH COASTAL REGION (1)
RUSSIAN RIVER NEAR HEADSRURG (STA. 9)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 1.00		Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ				
			Dissolved oxygen ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents	
1962																										
1/8 1250	268	57	10.9	105	279	7.5	2.60 ^c	9.1 0.40		1 0.03	147 2.41		7.6 0.21			0.4		165 ^e	13	130	9	1	Median 2.3	USGS		
2/13 1340	30200	52	9.7	88	90	7.2	0.86 ^c	4.0 0.17		0 0.00	46 0.75		2.0 0.06			0.0		53 ^e	17	43	5	2800	Max. 2400.			
3/6 1230	18600	48	10.8	93	105	7.7	0.96 ^c	4.0 0.17		0 0.00	55 0.90		1.5 0.04			0.1		62 ^e	15	48	3	240	Min. 0.06			
4/10 1245	752	65	10.0	105	286	8.3	2.68 ^c	9.9 0.43		0 0.00	158 2.59		6.0 0.17			0.3		168 ^e	14	134	4	2				
5/8 1120	284	64	11.0	114	281	7.9	28 1.40	9.8 0.43	1.2 0.03	0 0.00	153 2.51	15 0.31	4.5 0.13	2.1 0.03	0.0 0.00	0.3	15	166 ^f	14	130	5	8				
6/7 1145	180	73	10.7	123	281	8.2	2.66 ^c	8.9 0.39		0 0.00	156 2.56		5.5 0.16			0.3		166 ^e	13	133	5	3				
7/10 1800	151	74	12.0	139	276	8.4	2.54 ^c	9.8 0.43		0 0.00	150 2.46		6.6 0.19			0.4		162 ^e	14	127	4	5				
8/7 1235	195	72	8.7	99	255	8.2	2.28 ^c	9.7 0.42		0 0.00	146 2.39		6.2 0.17			0.4		150 ^e	16	114	0	5				
9/11 1205	200	71	11.5	129	243	6.7	26 1.30	8.1 0.35	0.8 0.02	4 0.13	133 2.18	10 0.21	4.0 0.11	0.3 0.00	0.0 0.00	0.4	12	151 ^g	13	113	0	2				
10/8 1440	189	70	9.7	108	242	7.8	2.25 ^c	9.0 0.39		0 0.00	144 2.36		7.4 0.21			0.3		143 ^e	15	112	0	3				
11/15 1445	440	57	13.0	125	237	8.3	2.14 ^c	8.1 0.35		0 0.00	136 2.23		4.8 0.14			0.5		140 ^e	14	107	0	4				
12/10 1055	388	52	9.8	89	252	7.5	2.32 ^c	8.5 0.37		0 0.00	143 2.34		4.9 0.14			0.4		149 ^e	14	116	0	20				

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves $f = 0.590$

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

RUSSIAN RIVER NEAR HOPLAND (STA. BA)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 0.98		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by 1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
			Dissolved oxygen ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- tro- gen (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.e Derived from conductivity vs TDS curves. $f = 0.590$

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-10

NORTH COASTAL REGION (1)

RUSSIAN RIVER, EAST FORK AT POTTER VALLEY POWERHOUSE (STA. 10A)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 0.97		Specific conductance (microhmhos at 25° C)	pH	Mineral constituents in								parts per million					Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total N.C. ppm	Tur- bid- ity in dbm	Coliform ^h MPN/ml	Analyzed by I
			Dissolved oxygen	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)	Other constituents						
1962	1/9 1525	312	46	11.2	97	154	7.3	1.35 ^c	5.2 0.23	0	77 1.26	4.5 0.13	0.4	92 ^e	15	68	5	15	Median 23	USGS					
	2/15 1130	298	46	11.4	98	118	7.1	1.13 ^c	3.5 0.15	0	62 1.02	2.5 0.07	0.1	71 ^e	12	57	6	70	Max. 620.						
	3/7 1610	302	44	10.5	88	107	7.5	0.96 ^c	3.2 0.14	0	56 0.92	2.2 0.06	0.1	64 ^e	13	48	2	95	Min. 0.23						
	4/11 1625	310	58	9.1	92	122	7.9	1.08 ^c	4.3 0.19	0	65 1.07	1.6 0.05	0.0	73 ^e	15	54	1	20							
	5/10 1025	107	56	11.1	109	151	8.1	1.7 0.85	5.5 0.45	0	79 1.29	2.2 0.06	0.4	92 ^f	16	65	0	6							
	6/7 0812	147	61	10.0	104	143	7.7	1.34 ^c	6.4 0.28	0	76 1.25	2.0 0.06	0.1	86 ^e	17	67	5	4							
	7/10 1520	201	64	9.8	106	137	8.0	1.21 ^c	4.8 0.21	0	74 1.21	2.0 0.06	0.2	82 ^e	15	61	0	5							
	8/9 0744	222	56	8.5	83	139	7.8	1.20 ^c	4.6 0.20	0	78 1.28	2.0 0.06	0.2	83 ^e	14	60	0	5							
	9/13 0914	222	75	8.3	101	149	7.0	1.8 0.90	4.9 0.21	0	83 1.36	2.5 0.07	0.0	105 ^g	13	67	0	2							
	10/10 1155	338	63	8.4	90	161	7.5	1.40 ^c	6.2 0.27	0	87 1.43	5.4 0.15	0.3	97 ^e	16	70	0	20							
	11/15 1145	309	54	10.1	97	150	7.6	1.28 ^c	6.0 0.26	0	82 1.34	3.5 0.10	0.6	90 ^e	17	64	0	45							
	12/12 0905	302	46	10.4	90	145	7.2	1.27 ^c	5.5 0.24	0	80 1.31	2.8 0.08	0.4	87 ^e	16	64	0	35							

o Field pH.

b Laboratory pH.

Sum of calcium and magnesium in epm.

Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.

e Derived from conductivity vs TDS curves $f = 0.600$

Determined by addition of analyzed constituents.

Geometric determination

g. Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate matrix samples made by Contracting Department of Toxic Testing, Division of Laboratories, at United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

SALMON RIVER AT SOMESBAR (STA. 2A)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (microhms at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent sodium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by
							equivalents															
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)						
1/10 1355	1,010	40	12.5	96	87	7.3 7.8	0.82 ^c	1.5 0.07		0 0.00	47 0.77		1.8 0.05		0.0		8	41	2	1	Maximum 230.	USGS
2/8 1115	3,200	44	11.8	96	88	7.3 7.8	0.84 ^c	1.9 0.08		0 0.00	50 0.82		1.1 0.03		0.0		9	42	1	4	Minimum 0.23	
3/8 1245	1,790	45	11.9	98	122	7.5 8.0	1.18 ^c	2.9 0.13		0 0.00	68 1.11		1.0 0.03		0.0		10	59	3	5	Median 2.3	
4/5 1000	3,700	48	11.6	100	80	7.3 7.7	0.72 ^c	1.5 0.07		0 0.00	44 0.72		1.0 0.03		0.0		9	36	0	1		
5/8 1215	3,240	51	11.1	99	56	7.2 7.8	0.39	1.2 0.05	0.7 0.02	0 0.00	31 0.51	0.8 0.02	0.5 0.01	0.0 0.00	0.0	0.4 0.00	37 ^f	25	0	3		
6/4 1530	1,770	53	10.5	96	60	7.2 7.7	0.56 ^c	1.4 0.06		0 0.00	33 0.54		0.5 0.01		0.0		10	28	1	2		
7/9 1525	379	69	8.5	93	87	7.2 8.0	0.78 ^c	2.1 0.09		0 0.00	48 0.79		1.2 0.03		0.0		10	39	0	0.5		
8/6 1445	267	68	8.5	92	117	8.2 8.2	1.04 ^c	3.4 0.15		0 0.00	68 1.11		3.8 0.11		0.0		13	52	0	1		
9/4 1530	180	73	9.4	108	130	8.2 7.1	0.90	3.2 0.27	0.6 0.02	0 0.00	68 1.11	3.8 0.08	2.5 0.07	1.8 0.03	0.1 0.01	1.5 0.05	82 ^f 81 ^f	58	2	0.8		
10/8 1430	681	56	11.2	107	100	7.8 7.7	0.92 ^c	2.4 0.10		0 0.00	57 0.93		2.2 0.06		0.0		10	46	0	3		
11/5 1420	544	54	10.5	97	111	7.5 8.0	0.98 ^c	2.5 0.11		0 0.00	66 1.08		2.2 0.06		0.0		10	49	0	1		
12/3 1330	14,400	49	12.4	108	76	7.3 7.5	0.69 ^c	2.0 0.09		0 0.00	42 0.69		1.0 0.03		0.1		12	34	0	70		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-10
ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

SCOTT RIVER NEAR FORT JONES (STA. 1b)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25° C)	pH a/b	Mineral constituents in parts per million								Total dis- solved solids in ppm	Per- cent sed- ium in ppm	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by ¹			
			ppm	%Sat			equivalents																	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)			Ni- trate (NO ₃)	Fluo- ride (F)				Barium (B)	Silico (SiO ₂)	Other constituents
1/1 1245	328	41	11.5	90	157	7.3 7.7	1.50 ^c	2.5 0.11			0 0.00	91 1.49		3.2 0.09		0.0		7	78	3	4	Maximum 620.	USGS	
2/7 1545	654	42	10.9	87	131	7.3 8.2	1.28 ^c	2.7 0.12			0 0.00	79 1.29		2.5 0.07		0.1		9	64	0	15	Minimum 0.23		
3/7 1250	800	47	10.6	90	192	7.5 8.1	1.90 ^c	3.2 0.14			0 0.00	110 1.80		2.0 0.06		0.0		7	95	5	20	Median 9.6		
4/4 1240	1,000	53	10.9	100	150	7.2 8.1	1.78 ^c	2.0 0.09			0 0.00	88 1.44		1.5 0.04		0.0		6	74	2	15			
5/15 1525	735	53	10.3	94	141	7.5 7.6	2.0 1.00	2.7 0.12	0.4 0.01		0 0.00	81 1.33	2.0 0.04	2.5 0.07	0.6 0.01	0.1 0.01	0.0	17	90 ^f	69	3	6		
6/12 1550	590	67	9.3	100	138	7.2 8.0	1.34 ^c	2.4 0.10			0 0.00	83 1.36		1.8 0.05		0.1		7	67	0	2			
7/6 1420	100	73	11.4	131	249	8.2 8.5	2.49 ^c	5.0 0.22			5 0.17	144 2.36		3.6 0.10		0.0		8	124	0	0.9			
8/14 1425	90	76	10.2	120	271	8.3 8.3	2.72 ^c	5.4 0.23			3 0.10	165 2.70		6.6 0.19		0.0		8	136	0	2			
9/13 1305	54	67	11.5	124	276	8.3 8.3	3.1 1.55	5.5 0.24	0.7 0.02		3 0.10	164 2.69	2.8 0.06	5.2 0.15	2.6 0.04	0.1 0.01	0.0	164 ^f 147 ^g	135	0	2			
10/4 1505	91	62	11.7	119	280	8.3 8.4	2.86 ^c	5.3 0.23			2 0.30	161 2.64		4.0 0.11		0.0		7	143	0	3			
11/15 1345	670	48	10.7	92	122	7.3 7.5	1.14 ^c	2.1 0.09			0 0.00	74 1.21		1.4 0.04		0.0		7	57	0	25			
12/11 1505	1,030	44	10.8	88	164	7.3 7.5	1.54 ^c	2.9 0.13			0 0.00	98 1.61		1.5 0.04		0.0		7	82	2	15			

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in gpm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

SHASTA RIVER NEAR YREKA (STA. 1a)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sediment in ppm	Hardness as CaCO ₃ Total ppm	Turbidity in ppbm	Coliform MPN/ml	Analyzed by ⁱ				
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents	
1/9 0835	205	44	11.3	92	514	8.1 8.1	4.13 ^c		4.0 1.74		0 0.00	296 4.85		26 0.73				0.4			30	207	0	10	Maximum 620.	USGS
2/7 1210	360	45	10.7	88	498	8.1 8.4	3.56 ^c		4.1 1.78		4 0.13	274 4.49		21 0.59			0.0		Tot. Alk. 282	33	178	0	3	Minimum 0.62		
3/7 1105	330	47	10.7	91	489	8.1 8.3	4.08 ^c		3.5 1.52		6 0.20	273 4.47		18 0.51			0.4		Tot. Alk. 285	27	204	0	10	Median 22.		
4/4 1100	200	57	10.4	100	421	8.3 8.5	3.40 ^c		3.0 1.30		12 0.40	224 3.67		17 0.48			0.3		Tot. Alk. 248	28	170	0	10			
5/16 1555	173	65	9.1	96	546	8.3 8.7	3.6 1.80	2.7 2.74	4.6 2.00	2.7 0.07	72 0.03	297 4.87	11 0.23	26 0.73	0.3 0.00	0.3 0.02		0.6	PO ₄ 0.40 Tot. Alk. 335	30	227	0	6	369 ^f		
6/13 0750	60	60	9.3	93	605	8.2 8.3	4.82 ^c		4.9 2.13		7 0.23	346 5.67		25 0.71			0.2		Tot. Alk. 360	31	241	0	2			
7/6 0830	43	63	9.1	94	637	8.4 8.3	5.13 ^c		5.2 2.26		5 0.17	364 5.97		32 0.90			0.6		Tot. Alk. 373	31	256	0	3			
8/14 0830	65	67	6.6	71	633	8.4 8.5	5.01 ^c		5.6 2.44		13 0.43	361 5.92		34 0.96			0.7		Tot. Alk. 387	33	250	0	7			
9/13 0715	64	61	6.7	68	641	8.1 8.1	3.8 1.90	3.7 3.08	5.2 2.26	4.4 0.11	0 0.00	378 6.20	7.2 0.15	34 0.96	1.8 0.03	0.3 0.02		0.6	PO ₄ 0.45 Tot. Alk. 318	31	249	0	8	417 ^f 403 ^g		
10/4 0845	154	55	9.6	91	525	8.3 8.4	4.04 ^c		4.4 1.91		11 0.37	296 4.85		24 0.68			0.5		Tot. Alk. 316	32	202	0	6			
11/15 0830	195	43	9.4	76	523	8.1 8.5	3.98 ^c		4.4 1.91		12 0.40	292 4.79		24 0.68			0.3		Tot. Alk. 316	32	199	0	5			
12/12 0815	300	43	11.9	90	541	8.4 8.5	4.50 ^c		3.6 1.57		16 0.53	300 4.92		22 0.62			0.6		Tot. Alk. 332	26	225	0	10			

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

0.00

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

SMITH RIVER NEAR CRESCENT CITY (STA. 3a)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ	
			ppm	% Sat			equivalents																	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
1/9 1800	1,830	46	11.1	93	96	7.3 7.8	0.94 ^c	1.5 0.07		0 0.00	53 0.87		3.5 0.10			0.0			47	4	1	Maximum 230.	USGS	
2/6 1535	1,790	48	11.6	100	95	7.3 7.9	0.91 ^c	2.0 0.09		0 0.00	56 0.92		3.4 0.10			0.0			46	0	4	Minimum 0.046		
3/6 1505	9,700	47	12.3	104	79	7.3 7.8	0.80 ^c	1.2 0.05		0 0.00	45 0.74		1.5 0.04			0.0			40	3	10	Median 2.2		
4/3 1415	4,230	50	11.6	103	79	7.3 7.8	0.75 ^c	1.4 0.06		0 0.00	44 0.72		1.5 0.04			0.0			38	2	2			
5/9 1625	2,740	53	11.1	102	84	7.5 7.8	6.3 0.31	6.1 0.50	1.5 0.07	0.3 0.01	0 0.00	47 0.77	0.8 0.02	1.6 0.05	0.0 0.00	0.1 0.01	0.0	1.4	PO ₄ 0.00	40	1	1.5		
6/6 1435	850	62	10.2	104	103	7.7 7.9	0.96 ^c	1.8 0.08		0 0.00	60 0.98		1.8 0.05			0.0			48	0	2			
7/11 1410	4.7	65	9.3	98	123	8.0 8.1	1.19 ^c	3.4 0.15		0 0.00	71 1.16		3.0 0.08			0.0			59	1	0.9			
8/9 1140	860	62	8.3	85	114	7.7 7.8	1.10 ^c	2.6 0.11		0 0.00	64 1.05		4.2 0.12			0.0			55	3	2			
9/7 1335	295	67	9.7	104	137	7.9 8.1	8.0 0.40	12 0.56	3.7 0.16	0.1 0.00	0 0.00	80 1.31	3.2 0.07	4.2 0.12	0.2 0.00	0.1 0.01	0.0	1.4	PO ₄ 0.25	68	2	1		
10/11 1430	25,800	54	12.3	114	77	7.3 7.4	0.75 ^c	1.7 0.07		0 0.00	44 0.72		1.5 0.04			0.0			38	2	35			
11/8 1200	860	50	11.3	100	114	7.4 8.0	1.08 ^c	2.3 0.10		0 0.00	68 1.11		3.1 0.09			0.0			54	0	1			
12/5 1445	8,960	50	12.3	109	80	7.2 7.6	0.74 ^c	1.9 0.08		0 0.00	44 0.72		2.2 0.06			0.1			37	1	5			

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

TRINITY RIVER NEAR RUHNT RANCH (STA. 46)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent calcium	Hardness as CaCO ₃ ppm	Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ								
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents					
1/10 1950	805	41	12.4	97	124	7.3 8.0	1.16 ^c	2.5 0.11		0 0.00	64 1.05		5.2 0.15							9	58	6	1							USGS
2/8 1435	4,020	46	11.4	96	115	7.3 7.9	1.06 ^c	2.8 0.12		0 0.00	62 1.02		2.6 0.07							10	53	2	50							
3/8 1530	2,770	47	11.3	96	151	7.7 8.0	1.06 ^c	3.0 0.13		0 0.00	82 1.34		1.5 0.04							8	74	7	15							
4/5 1325	2,660	53	10.6	97	109	7.5 7.9	1.04 ^c	2.0 0.09		0 0.00	62 1.02		2.2 0.06							8	52	1	4							
5/10 1240	1,500	54	10.5	97	99	7.6 7.9	1.3 0.65	3.3 0.27	2.5 0.11	0.3 0.01	0 0.00	53 0.87	3.0 0.05	2.2 0.06	0.1 0.00	0.0 0.00	0.0 0.00	11	PO ₄ 0.00	61 ^f	46	3	1							
6/4 1100	1,020	58	9.4	96	96	7.7 7.9	0.86 ^c	2.4 0.10		0 0.00	50 0.82		2.5 0.07							10	44	3	3							
7/12 1045	480	68	9.6	104	119	7.4 7.8	1.03 ^c	3.5 0.15		0 0.00	63 1.03		4.5 0.13							12	55	3	1							
8/10 1030	820	64	8.2	85	91	7.3 7.5	0.81 ^c	2.8 0.12		0 0.00	45 0.74		4.8 0.14							13	40	3	5							
9/8 1120	273	71	8.8	99	156	8.0 8.0	0.80	7.8 0.84	5.1 0.22	0.5 0.01	0 0.00	84 1.36	4.6 0.10	7.2 0.20	0.1 0.00	0.0 0.00	0.0 0.00	11	PO ₄ 0.00	93 ^f 91 ^g	72	3	10							
10/12 1110	5,560	53	10.7	98	94	7.4 7.4	0.84 ^c	2.6 0.11		0 0.00	50 0.82		3.5 0.10							12	42	1	60							
11/5 1100	540	55	10.3	97	152	7.6 8.3	1.40 ^c	4.0 0.17		1 0.03	79 1.29		6.0 0.17							11	70	4	1							
12/6 1200	2,280	48	11.3	97	132	7.7 7.8	1.24 ^c	3.2 0.14		0 0.00	72 1.15		2.2 0.06							10	62	3	2							

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE B-10
ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

TRINITY RIVER NEAR HOOPA (STA. 4)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent sodium in ppm	Hardness as CaCO ₃ in ppm		Turbid- ity in ppm	Coliform MPN/ml	Analyzed by			
			ppm	% Sat			equivalents per million																			
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents		
1/10 1130	1,930	42	10.9	87	150	7.3 7.9	1.15 ^c	2.6 0.11		0 0.00	79 1.29		4.8 0.14				0.0			73	8	2	Maximum 1,300.	USGS		
2/8 1325	14,100	45	11.8	98	126	7.5 7.6	1.20 ^c	2.9 0.13		0 0.00	72 1.18		3.0 0.06				0.1			60	1	70	Minimum 0.2			
3/8 1435	8,810	47	11.3	96	152	7.7 7.9	1.50 ^c	2.5 0.11		0 0.00	84 1.38		1.8 0.05				0.0			75	6	20	Median 2.3			
4/5 1215	8,180	53	10.8	99	127	7.6 7.8	1.24 ^c	2.0 0.09		0 0.00	71 1.16		1.4 0.04				0.0			62	4	15				
5/8 1000	3,740	58	10.0	97	119	7.5 7.9	1.4 0.70	2.5 0.11	0.5 0.01	0 0.00	65 1.07	4.8 0.10	2.4 0.07	0.0 0.00	0.0 0.00		0.0		12	73 ^f	9	3	3.5			
6/4 1230	2,020	60	9.9	99	98	7.7 7.9	0.88 ^c	2.3 0.10		0 0.00	54 0.89		1.5 0.04				0.0			44	0	3				
7/9 1305	885	71	9.0	101	150	8.0 8.1	1.41 ^c	3.8 0.17		0 0.00	82 1.34		3.7 0.10				0.1			70	3	0.9				
8/6 1220	522	72	8.3	94	177	8.0 8.1	1.65 ^c	4.7 0.20		0 0.00	96 1.57		7.4 0.21				0.0			83	4	1				
9/4 1230	460	73	8.6	99	190	8.0 8.2	2.2 1.10	5.0 0.22	0.5 0.01	0 0.00	104 1.70	9.2 0.19	6.0 0.17	0.2 0.01	0.0 0.00		0.0		13	117 ^f	11	7	2			
10/8 1145	850	58	10.4	101	175	7.8 7.9	1.64 ^c	4.3 0.19		0 0.00	94 1.54		5.0 0.14				0.0			82	5	3				
11/5 1205	1,280	57	10.6	102	179	7.8 8.2	1.68 ^c	4.8 0.21		0 0.00	100 1.84		4.8 0.14				0.0			84	2	1				
12/3 1100	32,600	50	11.9	105	106	7.6 7.5	1.04 ^c	3.2 0.14		0 0.00	62 1.02		1.8 0.05				0.1			52	1	160				

o Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (NO. 1)

TRINITY RIVER AT LEWISTON (STA. 44)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH a/b	Mineral constituents in parts per million								Total dissolved solids in ppm	Per cent sodium in ppm	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by ¹	
			ppm	%Sat			equivalents per million															
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)			Nitrate (NO ₃)	Fluoride (F)				Boron (B)
1962																						
1/10 1730	185	45	10.6	88	108	7.3 7.3	1.02 ^c	2.1 0.09	0	0 0.00	61 1.00		3.0 0.00			0.0		8	51	1	2	Maximum 230.
2/8 1600	397	45	11.1	92	111	7.3 7.3	1.04 ^c	2.2 0.14	0	0 0.00	26 0.92		2.0 0.00			0.0		12	52	6	50	Minimum 0.045-
3/8 1650	310	47	10.9	92	110	7.3 7.3	1.00 ^c	2.8 0.12	0	0 0.00	54 0.89		1.5 0.04			0.0		11	50	6	10	Median 13.
4/5 1450	188	56	10.5	100	104	8.0 8.1	1.04 ^c	2.5 0.11	0	0 0.00	60 0.93		2.2 0.06			0.0		10	52	3	1	
5/10 1415	180	50	10.7	95	101	8.0 7.7	1.4 0.37	2.6 0.11	0.6 0.02	0 0.00	26 0.92	3.2 0.07	2.4 0.07	0.2 0.00	0.0 0.00	0.0	1.3	64 ^f	46	0	3-5	
6/7 1145	170	59	10.0	98	126	7.9 8.0	1.18 ^c	2.6 0.11		0 0.00	70 1.15		2.2 0.06			0.2		9	59	2	3	
7/12 1350	190	61	9.6	97	96	8.1 8.0	0.89 ^c	2.7 0.12		0 0.00	25 0.90		1.8 0.05			0.0		12	45	0	1	
8/10 1340	195	60	9.3	93	99	8.0 8.1	0.91 ^c	2.9 0.13		0 0.00	55 0.90		3.2 0.09			0.0		12	46	1	7	
9/8 1330	198	59	10.4	102	97	7.9 7.9	6.7 0.33	7.2 0.59	0.4 0.01	0 0.00	56 0.92	1.2 0.02	2.8 0.03	0.1 0.00	0.1 0.01	0.0	1.4	63 ^f 62 ^g	45	0	9	
10/8 0900	203	50	11.3	100	97	7.6 7.7	0.88 ^c	2.4 0.10		0 0.00	58 0.95		2.2 0.06			0.0		10	44	0	2	
11/5 0920	225	48	11.0	95	99	7.6 7.5	0.92 ^c	2.3 0.10		0 0.00	56 0.92		2.4 0.07			0.0		10	46	0	1	
12/3 0900	541	46	11.0	92	117	7.2 7.6	1.02 ^c	4.6 0.20		0 0.00	58 0.95		2.0 0.06			0.1		16	51	3	70	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-10
ANALYSES OF SURFACE WATER
NORTH COASTAL REGION (NO. 1)

VAN DUZEN RIVER NEAR BRIDGEVILLE (STA. 5a)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million											Total dis- solved solids in ppm	Per- cent sedi- ment in ppm	Hardness as CaCO ₃ ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	per million																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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1/9 1235	158	44	11.8	96	159	7.3 8.0	1.18 ^c	3.2 0.14				0 0.00	80 1.31		2.5 0.07			0.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL) or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (2)

ALAMEDA CREEK NEAR NILES (STA. 73)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 1.00		Specific conductance (microhmhos at 25°C)	pH a	Mineral constituents in parts per million												Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform MPN/ml	Analyzed by ^h																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
			Dissolved oxygen ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)			Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.e Derived from conductivity vs TDS curves $f = 0.610$

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (NO. 2)

CARQUINEZ STRAITS AT MARTINEZ (STA. 28a.)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm g	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by
			ppm	% Sol			equivalents															
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)						
1962																			USBR			
1/17 1200	48				22857													16300				
2/19 1345					314													204				
3/13 1305	52				372													232				
4/18 1225					5510													3446				
5/16 1410	64				11360													7466				
6/20 1435	70				9614													6126				
7/17 1310	66				19494													14032				
8/14 1230	70				18196													16340				
9/12 1215	64				14782													10156				
10/17 1020	60				737													436				
11/14 1300	59				14118													11028				
12/20 1315	52				10374													6672				

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

0.00

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

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R-11

SAN FRANCISCO BAY REGION (2)

COYOTE CREEK NEAR MADRONE (STA. 82)

Field no.

Sum of calcium and magnesium in epm.

Derived from conductivity vs TDS curves $f = 0.584$

Gravimetric determination

Mineral analyses made by: Regional Survey, United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LDBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (2)

LOS GATOS CREEK AT LOS GATOS (STA. 74)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 0.98		Specific conductance (micromhos at 25°C)	pH a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by ¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			Dissolved oxygen ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trote (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.e Derived from conductivity vs TDS curves. $\epsilon = 0.610$

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-11
ANALYSES OF SURFACE WATER
SAN FRANCISCO BAY REGION (2)

NAPA RIVER NEAR ST. HELENA (STA. 72)

Date and time sampled P.S.T.	Discharges in cfs	Temp in °F	e = 0.99		Specific conductance (micromhos at 25°C)	pH a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent lead- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
			Dissolved oxygen ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves $f = 0.667$

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (2)

SACRAMENTO RIVER NEAR WALLARD SLOUGH (STA. 15e)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million							Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃ ppm	Total N.C. ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by			
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)								equivalents per million		
																					Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)
1962	Tidal																						
1/17 1320		55			5647		892					1718						69					
2/19 1305					326		26					43						35					
3/13 1305		64			283		22					31						34					
4/18 1140					177		14					17						34					
5/11 1320		65			182		16					19						38					
6/20 1344		78			601		68					125						49					
7/17 1410		72			4505		768					1342						74					
8/14 1120		75			4011		593					1193						64					
9/18 1120		67			3515		552					1019						68					
10/17 1045		60			249		28					40						49					
11/14 1200		63			619		69					131						48					
12/20 1215		63			239							27						136					
																			USER				

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs. TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

CARMEL RIVER AT ROBLES DEL RIO (STA. 83)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 0.99		Specific conductance (microhmhos at 25°C)	pH ^a	Mineral constituents in										parts per million					Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by i																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silico (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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o Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.e Derived from conductivity vs TDS curves ± 0.620

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-12
ANALYSES OF SURFACE WATER
CENTRAL COASTAL REGION (NO. 3)
CUYAMA RIVER NEAR GAREY (STA. 44a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃		Tur- bid- ity in pbm	Caliform ^h MPN/ml	Analyzed by ⁱ		
			ppm	% Sat		Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	
1962																								
1-8 1330	Dry No flow																							
2-5 1450	Dry No flow																							
3-5 1445	5 est.	62	13.2	1782	7.9 ^a	146 7.29	91 7.51	120 5.22	5.2 0.13	0 0.00	206 3.38	700 14.58	85 2.40	3.0 0.05	0.2 0.05	0.30	14	1448	26	780	571	<25	6.2 6.2	DWR
4-4 1500	1/2 est.	74	14.0	1890	8.1 ^a			145 6.31		0 0.00	224 3.68		95 2.68			0.32		28	818	634	<25	23 6.2		
5-1 1300	250 est.	68	12.8	1169	8.0 ^a	133 6.64	44 3.62	62 2.70	4.3 0.11	7.2 0.24	140 2.30	452 9.41	32 0.90	1.3 0.02	0.7 0.04	0.23	20	875	21	513	386	<25	23 23	
6-7 1230	250 est.	72	11.2	1046	7.9 ^a			55 2.39		0 0.00	173 2.84		32 0.90			0.21		21	451	309	<25	2.3 2.3		
7-10 1025	275 est.	74	10.0	1118	8.1 ^a			63 2.74		0 0.00	195 3.20		34 0.96			0.21		22	484	324	<25	62 23		
8-7 1530	49	80	10.8	1357	8.0 ^a			70 3.05		0 0.00	229 3.76		42 1.18			0.30		21	585	397	<25	2.3 0.6		
9-11 0740	1/2 est.	64	5.2	1749	7.3 ^a	179 8.93	85 6.95	116 5.05	4.7 0.12	0 0.00	353 5.78	623 12.98	73 2.06	0.4 0.00	1.0 0.05	0.34	23	1355	24	794	505	<25	2.3 <0.15	
10-2 0750	Dry No flow																							
11-14 0725	Dry No flow																							
12-4 0750	Dry No flow																							

a Field pH.
b Laboratory pH.
c Sum of calcium and magnesium in ppm.
d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown 0.00
e Derived from conductivity vs TDS curves
f Determined by addition of analyzed constituents.
g Gravimetric determination.
h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.
i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

NACIMIENTO RIVER NEAR SAN MIGUEL (STA. 438)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ^h						
			ppm	%Sat		Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents			
1962																											
1/8 1810	Dry No Flow																										
2/6 1100	No surface inflow to pond.																										
3/6 1010	3 (est.)	54	6.8	64	479	7.4	49 2.44	22 1.84	15 0.65	4.6 0.12	0 0.00	200 3.28	55 1.15	15 0.42	4.7 0.08	0.30 0.01	0.04	31		289 ^g	13	214	50	425	Median 3.6		
4/4 1050	Trickle	60	6.8	69	446	7.4			15 0.65		0 0.00	193 3.16		14 0.39			0.06			278 ^e	14	207	49	425	Max. 62.		
5/2 1015	380	58	12.8	127	273	8.2	24 1.20	15 1.22	9 0.39	1.2 0.03	0 0.00	120 1.96	30 0.62	6 0.17	2.1 0.03	0.10 0.00	0.09	12	PO ₄	0.1 Ag = 0.00	157 ^h	14	121	23	425	Min. <0.45	DWR
6/7 0915	468	54	10.0	94	257	7.5			9 0.39		0 0.00	112 1.84		6 0.17			0.08			160 ^e	15	114	22	425			
7/10 1555	551	66	12.0	130	253	8.2			9 0.39		0 0.00	105 1.72		4 0.11			0.09			158 ^e	16	103	17	425			
8/7 0845	574	54	8.8	83	234	7.2	2.04		7.7 0.33		0 0.00	108 1.77		6.0 0.17			0.0			146 ^e	14	102	13	2		USGS	
9/5 1230	530	60	12.6	128	232	8.0	23 1.15	12 0.95	7.3 0.32	1.2 0.03	0 0.00	112 1.84	23 0.48	6.0 0.17	1.2 0.02	0.2 0.01	0.1	14	PO ₄	0.20	143 ^f	13	105	13	5		
10/2 1345	500 (est.)	67	13.4	147	228	8.2	2.21		8.1 0.35		0 0.00	123 2.02		6.4 0.18			0.2			142 ^e	14	110	9	15			
11/6 1300	500 (est.)	65	10.4	112	261	7.9	2.32		8.6 0.37		0 0.00	132 2.16		5.8 0.16			0.0			163 ^e	14	116	8	3			
12/3 1800	200 (est.)	60	9.8	100	272	8.0	2.40		9.4 0.41		0 0.00	130 2.13		6.9 0.19			0.0			170 ^e	15	120	13	2			

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves f = 0.625

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 8-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

PAJARO RIVER AT CHITTENDEN (STA. 77)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 1.00		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in							parts per million					Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
			Dissolved oxygen	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silico (SiO ₂)							Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves. f = 0.631

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

SALINAS RIVER NEAR BRADLEY (STA. 43C)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ	
							equivalents																
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluor- ide (F)							Baron (B)
1962																							
1/8 1645	9.5	56	14.0	136	930	8.3		66 2.87		13 0.44	222 3.64		50 1.41			0.25		349	145	<25	Median 5.6	DWR	
2/6 0840	19	50	8.0	72	766	7.5	71 3.54	53 2.30	2.0 0.05	0 0.00	285 4.68	156 3.24	37 1.04	0.4 0.00	0.40 0.02	0.19	26	297	63	<25	Max. 62.		
3/6 0730	570	50	8.4	75	634	8.1	56 2.79	45 1.83	2.4 0.06	0 0.00	207 3.40	112 2.33	27 0.76	4.2 0.07	0.50 0.03	0.12	25	406 ^d	30	231	61	280	Mfn. <0.45
4/4 0850	230	56	10.0	97	663	8.1		45 1.95		0 0.00	224 3.68	32 0.90				0.14		415 ^e	27	260	76	<25	
5/2 0730	400	58	10.0	99	358	8.0	30 1.50	16 0.70	1.5 0.04	0 0.00	139 2.28	48 0.99	13 0.37	1.6 0.03	0.20 0.01	0.10	15	216 ^d	19	148	34	40	
6/7 0705	474	56	9.6	93	292	7.8		15 0.65		0 0.00	124 2.04	7 0.20				0.08		185 ^e	21	121	19	<25	
7/10 1415	382	76	10.0	121	282	8.0		12 0.52		0 0.00	118 1.94	6 0.17				0.09		180 ^e	18	118	20	<25	
8/7 0935	555	60	10.8	110	251	7.7	21.6 ^c	10 0.44		0 0.00	116 1.90	1.4 0.04				0.0		160 ^e	17	108	13	10	USGS
9/5 1010	540	61	9.9	102		7.8	Sample Destroyed																
10/2 1215	470	68	9.4	104	270	8.1		11 0.48		0 0.00	119 1.95	13 0.37				0.5		172 ^e	17	116	18	15	
11/6 1200	244	62	9.7	101	300	7.9		12 0.52		0 0.00	143 2.34	8.2 0.23				0.1		191 ^e	17	130	13	3	
12/3 1600	260	60	9.9	100	314	7.8		13 0.57		0 0.00	145 2.38	9.1 0.26				0.1		200 ^e	18	133	14	2	

^a Field pH^b Laboratory pH^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00^e Derived from conductivity vs TDS curves $f = 0.625$ ^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-12
ANALYSES OF SURFACE WATER
CENTRAL COASTAL REGION (3)

SALINAS RIVER AT PASO ROBLES (STA. 43A)

Date and time sampled P.S.T.	Discharge Temp in cfs	Dissolved oxygen		Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million											Total dissolved solids in ppm	Per-cent sodium	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by			
		ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)							Silica (SiO ₂)	Other constituents	
1962																									
1/8 1600	Dry No Flow																								
2/6 1150	Dry No Flow																								
3/5 1730	200 56	8.8	85	645	7.8	68 3.39	30 2.47	27 1.17	2.0 0.05	0 0.00	226 3.70	112 2.33	26 0.73	15 0.24	0.40 0.02	0.06	24		424 ^g	17	293	108	<25	Median 9.6	DMR
4/4 1200	105 66	10.0	109	686	7.3			32 1.39		0 0.00	244 4.00		30 0.85			0.08		458 ^e	18	313	113	<25	Max. 700.		
5/2 1100	10 78	7.6	94	982	7.6	98 4.89	39 3.21	56 2.44	2.3 0.06	0 0.00	295 4.84	188 3.91	64 1.80	1.9 0.03	0.50 0.026	0.15	28	PO ₄ 0.4 AS= 0.00	23	405	163	<25	Min. 0.6		
6/7 1000	Dry - Not Sampled																								
7/10 1630	Dry - Not Sampled																								
8/7 1215	Dry - Not Sampled																								
9/5 1400	Dry - Not Sampled																								
10/2 1530	Dry - Not Sampled																								
11/6 1430	Dry - Not Sampled																								
12/4 0900	Dry - Not Sampled																								

^a Field pH

^b Laboratory pH.

^c Sum of calcium and magnesium in ppm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁺⁶), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves. $\epsilon = 0.667$

^f Determined by addition of analyzed constituents.

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

SALINAS RIVER NEAR SPRICKLES (STA. 43)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 1.00		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by ^h																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.e Derived from conductivity vs TDS curves. $r = 0.587$

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-12
ANALYSES OF SURFACE WATER
CENTRAL COASTAL REGION (3)

SAN ANTONIO RIVER NEAR PLEYNTO (STA. 43D)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- troite (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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^a Field pH.

^b Laboratory pH.

^c Sum of calcium and magnesium in ppm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves. $f = 0.667$

^f Determined by addition of analyzed constituents

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

SAN BENITO RIVER NEAR BEAR VALLEY FIRE STATION (STA. 77A)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 0.97		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ^h			
			Dissolved oxygen ppm	% Sol			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents
1962																									
1/8 1720	0.2	53	9.7	92	2160	8.2	13.32		278 12.09		22 0.73	456 7.47		197 5.56			1.8		1400 ^e	48	666	236	5	Median 6.2	USCS
2/5 1745	1.0	55	9.4	91	2240	8.2	14.30		278 12.09		12 0.40	541 8.87		192 5.42			2.1		1452 ^e	46	715	252	2	Max. 620	
3/13 1740	25	57	8.6	86	1250	8.4	9.52		115 5.00		29 0.97	382 6.26	250 5.20	67 1.89			0.8		810 ^e	38	476	116	300	Min. 0.62	
4/5 0830	14	54	11.5	110	1260	8.4	10.10		106 4.61		28 0.93	434 7.11		69 1.95			0.9		820 ^e	31	505	103	5		
5/2 1510	85	77	10.8	134	1470	8.4	42 2.10	108 8.90	190 8.26	3.2 0.08	35 1.17	440 7.21	356 7.41	118 3.33	0.0 0.00	0.2 0.01	1.5	8.3	1080 ^f	43	550	130	2		
6/13 1012	88	65	11.3	123	812	8.4	7.50		50 2.18		16 0.53	394 6.46		28 0.79			0.5		530 ^e	23	375	20	6		
7/12 1208	11	76	10.1	124	1300	8.5	9.92		130 5.66		38 1.27	460 7.54		69 1.95			1.3		845 ^e	36	496	55	2		
8/8 0840	0.4	63	10.0	107	1930	8.0	11.43		248 10.79		18 0.60	500 8.20		164 4.63			1.7		1252 ^e	49	572	132	5		
9/4 1750	0.2	73	8.8	105	2090	8.0	56 2.79	118 9.71	280 12.18	4.8 0.12	29 0.97	501 8.21	485 10.10	178 5.02	2.2 0.04	0.4 0.02	2.1	13	1420 ^g	49	625	167	4		
10/2 1005	0.2	63	9.2	98	2120	7.9	12.94		274 11.92		0 0.00	554 9.08		260 7.33			1.7		1375 ^e	48	647	193	5		
11/6 0915	0.1	56	10.9	107	2180	8.2	13.64		270 11.74		18 0.60	564 9.24		186 5.25			2.0		1413 ^e	46	682	190	2		
12/3 1415	1.0	65	12.0	131	1860	8.2	12.00		224 9.74		35 1.17	482 7.90		143 4.03			1.6		1208 ^e	45	600	146	1		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.e Derived from conductivity vs TDS curves $F = 0.648$

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR); as indicated.

TABLE B-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

SAN LORENZO RIVER AT BIG TREES (STA. 75)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	a = 0.99		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by i				
			Dissolved oxygen ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents	
1962																										
1/9 1500	17	55	12.9	121	420	8.4	3.16 ^c	28 1.22		2 0.07	146 2.39		31 0.87				0.1		Total Alkalinity: 150	255 ^e	28	158	35	10	Median 6.2	USGS
2/6 1420	20	53	13.2	122	421	8.4	3.08 ^c	28 1.22		0 0.00	141 2.31		30 0.85				0.1			256 ^e	28	154	38	2	Max. 230.	
3/14 1415	192	48	10.8	94	334	7.5	2.58 ^c	18 0.78		0 0.00	102 1.67		16 0.45				0.1			203 ^e	23	129	45	4	Min. 2.3	
4/5 1625	83	57	9.5	94	371	7.8	2.80 ^c	20 0.87		0 0.00	120 1.97		19 0.54				0.0			226 ^e	24	140	42	4		
5/3 1605	42	66	11.2	121	387	8.1	2.15	9.5 0.78	24 1.04	2.2 0.06	0 0.00	131 2.15	53 1.10	22 0.62	0.0 0.00	0.2 0.01	0.0	25		244 ^f	26	146	39	8		
6/12 1515	29	66	10.5	113	381	7.6	2.78 ^c	23 1.00		0 0.00	137 2.25		25 0.71				0.0		232 ^e	26	139	27	1			
7/11 1458	20	62	10.3	106	378	8.2	2.78 ^c	24 1.04		0 0.00	136 2.23		25 0.71				0.0		230 ^e	27	139	27	2			
8/8 1840	13	70	8.1	92	370	7.2	2.64 ^c	22 0.96		0 0.00	138 2.26		23 0.65				0.0		225 ^e	27	132	19	5			
9/6 1450	12	68	9.4	104	358	8.2	2.40	8.0 0.66	22 0.96	1.7 0.04	0 0.00	136 2.23	37 0.77	24 0.68	0.9 0.01	0.2 0.01	0.1	29	226 ^g	26	133	21	4			
10/3 1400	17	62	9.7	100	382	7.9	2.72 ^c	27 1.17		0 0.00	141 2.31		28 0.79				0.4		232 ^e	30	136	20	4			
11/7 1320	27	56	11.4	109	399	7.8	2.96 ^c	25 1.09		0 0.00	144 2.36		24 0.68				0.1		242 ^e	27	148	30	1			
12/4 1810	27	51	9.7	87	382	7.6	2.70 ^c	28 1.22		0 0.00	139 2.28		25 0.71				0.0		232 ^e	31	135	21	2			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.e Derived from conductivity vs TDS curves $f = 0.608$

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (NO. 3)
SANTA YNEZ RIVER AT CACHUMA RESERVOIR (STA. 44b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ in ppm	Turbidity in mpm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO ₃)	Bicarbonates (HCO ₃)	Sulfates (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as $\frac{0.0}{0.00}$ except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

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TABLE B-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (NO. 3)
SANTA YNEZ RIVER NEAR SOLVANG (45a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhm/cm at 25°C)	Mineral constituents in parts per million								Total dissolved solids in ppm	Per cent sodium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ
					Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- dioxide (CO ₂)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluor- ide (F)	Baron (B)	Silica (SiO ₂)	Other constituents	
1962																		
1-8 1330	Dry No flow																	
2-5 1540	4 est.	64	10.0	101	125 5.24	72 5.92	67 2.91	3.0 0.03	0 0.00	417 5.84	313 6.52	64 1.86	1.5 0.02	0.30 0.01	0.42	28		2.3 6.2
3-5 1215	340	60	9.2	91	74 3.69	38 3.15	35 1.52	3.6 0.09	14 0.43	190 3.12	204 4.25	18 0.51	2.6 0.04	0.50 0.02	0.30	11		0.6 2.3
4-3 1810	75	60	13.6	134			45 1.96	19 0.64		229 3.76		26 0.73			0.30			2.3
5-1 1050	13	76	12.0	142	20 4.49	59 4.83	50 2.18	2.0 0.05	0 0.00	317 5.20	256 5.33	35 0.99	0.5 0.01	0.50 0.026	0.34	28	PO ₄ = 0.03 As = 0.00	6.2 2.3
6-6 1600	9	78	11.6	140			55 2.39		0 0.00	267 4.36		36 1.02			0.33			6.2 2.3
7-10 0915	No inflow Ponds not sampled																	
8-6 1420	Dry No flow																	
9-10 1510	Dry No flow																	
10-1 1505	Dry No flow																	
11-14 0820	Dry No flow																	
12-5 0905	Dry No flow																	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as $\frac{0.0}{0.00}$ except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-12

ANALYSES OF SURFACE WATER

CENTRAL COAST-L REGION (3)

UYAS CREEK NEAR MORGAN HILL (STA. 96)

Date and time sampled P.S.T.	Discharge Temp in cfs	a = 0.99		Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform ^b MPN/ml	Analyzed by ⁱ
		ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)				
1962	Dry																				
1/8 1500																					
2/5 1515	1.0 (est.)	10.5	103	480	7.9	4.60 ^c		14 0.61		0	196 3.21		11 0.31			0.1					
3/13 1340	45 (est.)	9.8	88	223	7.9	2.02 ^c		6.9 0.30		0	107 1.75		6.0 0.17			0.1					
4/4 1600	8.5 (est.)	13.5	135	269	8.4	2.52 ^c		8.1 0.35		10	111 1.82		6.6 0.19			0.0					
5/2 1200	18 (est.)	12.0	124	254	8.2	2.6 1.30	13 1.04	8.5 0.37	1.1 0.03	0	124 2.03	22 0.46	6.0 0.17	0.9 0.01	0.2 0.01	0.0	18				
6/13 1458	123 (est.)	13.1	134	273	8.2	2.48 ^c		8.5 0.37		0	139 2.28		6.0 0.17			0.1					
7/12 1350	95 (est.)	11.8	132	281	8.2	2.56 ^c		9.0 0.39		0	142 2.33		6.0 0.17			0.1					
8/8 1100	1.0 (est.)	8.5	102	341	8.4	3.20 ^c		11 0.48		0	182 2.98		7.6 0.21			0.0					
9/4 1530	0.25 (est.)	11.3	141	338	8.2	3.4 1.70	18 1.48	12 0.52	0.9 0.02	10 0.33	166 2.72	23 0.48	7.5 0.21	0.4 0.01	0.1 0.01	0.1	26				
10/1 1540	3.0 (est.)	11.2	140	354	8.2	3.48 ^c		12 0.52		4	192 3.15		8.8 0.25			0.0					
11/5 1610	125 (est.)	9.2	92	207	7.3	1.94 ^c		7.0 0.30		0	101 1.68		5.2 0.15			0.1					
12/3 1145	15 (est.)	11.2	106	283	7.6	2.62 ^c		8.7 0.38		0	149 2.44		6.5 0.18			0.0					

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.e Derived from conductivity vs TDS curves $f = 0.617$

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (NO. 4)
COLORADO RIVER AQUEDUCT AT LA VERNE (STA. 69)

Date and time of sample P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (microhm/cm at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ in ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Barium (Ba)	Silica (SiO ₂)				
1 to 2 January Composite Sample		55			985	85 4.29	30 2.42	98 4.26	4 0.10	1 0.03	144 2.36	294 6.12	20 2.54	1.5 0.02	0.4 0.02		2.3	38 336	216	2.5	MMD
February Composite Sample		53			1080	87 4.34	29 2.34	97 4.22	4 0.10	1 0.03	145 2.38	294 6.12	87 2.45	1.6 0.03	0.4 0.02		2.4	38 334	213	2.2	
March Composite Sample		54			1080	86 4.29	29 2.34	99 4.31	5 0.13	1 0.03	144 2.36	293 6.09	90 2.54	1.8 0.03	0.4 0.02		2.6	39 332	212	1.5	
April Composite Sample		58	8.6	84	1085	88 4.39	28 2.30	99 4.31	5 0.13	2 0.07	143 2.35	295 6.14	88 2.43	1.4 0.02	0.4 0.02		2.2	39 335	214	0.8	
May Composite Sample					8.4 ^b	87 4.34	29 2.38	99 4.31	5 0.13	2 0.07	142 2.33	293 6.09	88 2.43	1.7 0.03	0.4 0.02	0.17 0.05	2.0	39 337	217	0.06	
June Composite Sample					1090	86 4.29	30 2.42	96 4.15	5 0.13	0 0.00	142 2.33	298 6.20	88 2.43	1.6 0.03	0.4 0.02		2	38 336	220	0.8	
July Composite Sample		73			110	85 4.24	30 2.42	102 4.44	5 0.15	1 0.03	132 2.16	300 6.24	94 2.65	1.8 0.03	0.4 0.02		2	694	334	0.7	
August Composite Sample		75			1120	84 4.19	30 2.47	102 4.44	5 0.13	0 0.00	133 2.18	306 6.36	95 2.66	1.4 0.02	0.4 0.02		2.3	700	333	0.7	
September Composite Sample		76			1130	84 4.19	31 2.51	108 4.70	5 0.13	0 0.00	138 2.26	310 6.45	96 2.71	1.4 0.02	0.5 0.03		2	714	335	1.0	
October Composite Sample					1115	87 4.34	30 2.47	105 4.57	5 0.13	1 0.03	137 2.25	314 6.53	94 2.65	1.6 0.03	0.4 0.04		2.4	716	341		
November Composite Sample						89 4.44	29.5 2.42	109 4.74	4 0.10	1 0.03	142 2.33	312 6.49	98 2.76	1.8 0.03	0.4 0.02		2.9	726	343	1.2	
December Composite Sample					1135	90 4.49	30 2.47	104 4.52	5 0.13	1 0.03	143 2.35	312 6.49	96 2.71	1.6 0.03	0.4 0.02			721	348	0.9	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE H-13
ANALYSES OF SURFACE WATER
LOS ANGELES REGION (NO. 4)
LOS ANGELES AQUEDUCT NEAR SAN FERNANDO (70)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in										parts per million					Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
			ppm	% Sat			Calcium (Ca)	Magnes- ium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluoride (F)			Baron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (NO. 4)

LOS ANGELES RIVER AT LONG BEACH (STA. 48)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (micromhos at 25°C)	Mineral constituents in equivalents per million								Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ in ppm		Tur- bid- ity in ppm	Analyzed by		
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)			Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)
1962																					
1-3 1030	11	59	0	0	7.5	222	107	3100		0.0	353	225	4041.0	0				9546	Slight	21000	LEDPH
2-7 1030	19.4	64	0	0	7.3	584	292	6800		0.0	633	24	14750	1.3				29760	Mod- erate		
3-7	not sampled																				
4-4 1030	0.6	64	0.8	0.02	8.3	166	100	1450		0.0	228	232	3170	0.0				5887	Mod- erate	62	
5-2 1430	1.6	92	0.0	0	7.3	580	293	8800		0.0	518	7.9	14370	1.8				29000	Mod- erate	0.45	LEDPH
5-8 0950	18.6	74	5.2	60	11.641	186	98	2200	26	0	381	197	3750	1.0				7050	40	700	DWR
						9.283	8.65	95.70	0.65	0.00	6.24	4.11	105.75	0.02					864	552	700
6-6 1030	17	69	2.8	3.3	7.6	205	98	2650		0.0	262	201	4065	0.8				8200	Mod- erate	700	LEDPH
7-7 1000	12	81	1.9	2.4	7.4	258	102	3700		0.0	396	164	5800	0.0				11451	Mod- erate	24000	
8-1 1000	11.0				7.3	211	125	2900		0.0	341	246	4450	0.0				9300	Mod- erate	70+	
9-7 1000	15.8	68	0	0.0	7.7	304	135	4995		0.0	406	255.5	7380	0.0				13865	Mod- erate	62000	LEDPH
9-7 0750	15.4	74	1.2	12	14.993	230	118	3150	39	0	554	202	5175	3.0				9800	65	62	240
						11.433	9.70	137.04	1.00	0.00	9.03	4.20	145.94	0.05				1056	25		
11-7 1030	14.6	68	Not avail- able		7.3	216	152	3000		0.00	3.08	471	5300	0				9550	700000		LEDPH
12-5 1030	13.8	61			7.6	202	183	3000		0	284	446	4650	0.2				9750	700000		LEDPH

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Tarmal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-13
ANALYSES OF SURFACE WATER
LOS ANGELES REGION (NO. 4)
LOS ANGELES RIVER AT LOS ANGELES (STA. 47)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in								parts per million					Total dis- solved solids in ppm	Per- cent sodium in ppm	Hardness as CaCO ₃ ppm	Tur- bid- ity - MPN/ml	Analyzed by i																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁺⁶), reported here as 0.0 except as shown.
0.00

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBOPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (NO. 4)
LOS ANGELES RIVER AT LOS ANGELES (STA. 47)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ in ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by i
			ppm	% Sat		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO ₃)	Bicarbonates (HCO ₃)	Sulfates (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)				
1962																					
11-7 1100	0.1	64	6.56	68.5	8.2	112	87	146.2		0	240	621.4	640	7			2.0			930	M/D
12-5 1030	0.03	57	6.64	64	8.1	112	83	598		40	350	518.5	670	2			1.2			6.64 64	M/D

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in egm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-1

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (NO. 4)
MATILDA CREEK ABOVE MATILDA DAM STA. 452J

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhm/cm at 25°C)	Mineral constituents in parts per million												Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by
					equivalents																	
					Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)						
1962																						
1-9 0950	4.5	58	8.0	79	1311	7.5 ^a	91 3.96		0 0.00	301 4.94		70 1.97			1.90		28	507	260	<25	1.3 1.3	DWR
2-7 0740	6.5	54	8.4	79	1123	7.3 ^a	83 3.69	3.0 0.07	0 0.00	221 3.62	345 7.18	54 1.52	0.6 0.01	0.9 0.05	1.60	18	29	444	263	<25	0.46 0.6	
2-8 1135	817	49			453	7.8 ^b	15 0.66	1.6 0.04	0 0.00	140 2.30	109 2.26	2 0.05	9.3 0.14	0.3 0.017	0.11	13	14	203	88	3100		
3-8 1130	98	58	11.2	108	881	8.1 ^a	29 1.26		0 0.00	215 3.52		8 0.23			0.32		13	422	246	<25	2.3 <0.45	
4-5 1750	59	58	10.8	104	865	8.2 ^a	37 1.61		0 0.00	207 3.40		13 0.37			0.35		16	413	243	<25	0.6 <0.45	
5-3 1700	32	60	9.2	92	922	7.9 ^a	39 1.70	1.9 0.05	0 0.00	222 3.64	295 6.14	15 0.42	0.0 0.00	0.67 0.035	0.44	22	16	432	250	<25	0.6 <0.45	
6-8 0800	20	62	8.8	90	965	7.9 ^a	44 1.91		0 0.00	232 3.80		21 0.59			0.66		18	435	245	<25	6.2 2.3	
7-9 0730	8.6	70	8.0	89	1019	7.3 ^a	50 2.18		0 0.00	245 4.02		27 0.76			0.72		19	454	254	<25	6.2 2.3	
8-6 0940	6.0 est.	72	8.4	96	1088	8.0 ^a	58 2.52		0 0.00	239 3.92		42 1.18			1.18		22	445	249	<25	6.2 6.2	
9-11 1345	3.5	68	8.0	88	1097	7.9 ^a	74 3.22	3.1 0.08	0 0.00	242 3.96	300 6.25	63 1.78	1.5 0.02	1.2 0.06	1.84	21	27	439	241	<25	6 210	
10-2 1100	3.5	72	8.0	91	1128	7.8 ^a	79 3.41		0 0.00	245 4.02		69 1.95			2.14		28	448	247	<25	2.3	
11-13 1435	4.0	54	10.4	97	1133	8.1 ^a	73 3.18		0 0.00	246 4.04		67 1.89			1.66		26	443	241	<25	6.2 <0.45	
12-4 1520	2.5	62	7.6	77	1140	7.7 ^a	75 3.26		0 0.00	246 4.04		66 1.86			1.62		26	465	263	<25	0.6 2.3	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs. TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWSD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (NO. 4)
MISSION CREEK AT WHITTIER MARROWS (STA. 49a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhm/cm at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm N.C. ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by 1		
					equivalents																	
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluor- ide (F)							Baron (B)	Silica (SiO ₂)
1962																						
1-10 0955	0.8	58	7.4	72		21 0.91			0 0.00	234 3.34		15 0.42			0.09			290	98	<25	6 6	DWR
2-13 0950	4.2	58	8.0	79	94 4.69	25 2.03	24 1.04	3.6 0.09	0 0.00	224 3.68	158 3.29	22 0.62	7.3 0.12	0.6 0.03	0.12	22		336	152	<25	700 21	
3-7 1345	9.2	64	11.2	116			20 0.87		17 0.56	193 3.16		20 0.56			0.20			316	130	<25	6 13	
4-3 0820	2.2	62	7.2	73	88 4.39	26 2.11	24 1.04	2.2 0.06	0 0.00	256 4.20	133 2.76	21 0.59	2.5 0.15	0.50 0.03	0.20	26		328	118	<25	230 60	
5-8 0806	1.3	64	7.2	75	89 4.44	21 1.73	20 0.87	2.2 0.06	0 0.00	251 4.12	105 2.19	18 0.51	6.0 0.10	0.64 0.03	0.08	23	PO ₄ = 0.04 As = 0.00	390	184	<25	23 62	
6-11 0820	1.1	64	6.0	63			25 1.09		0 0.00	259 4.24		18 0.51			0.13			348	136	<25	23 13	
7-6 0840	0.9	72	8.0	86			23 1.00		0 0.00	234 3.34		17 0.43			0.10			301	109	<25	240 62	
8-2 0825	1.2	70	6.8	76	54 2.69	21 1.73	18 0.78	2.4 0.07	0 0.00	163 2.68	81 1.68	14 0.39	3.0 0.05	0.48 0.03	0.09	18		195	61	<25	6 130	
9-13 0910	0.44	68	7.6	83			16 0.70	2.8 0.07	0 0.00	177 2.90	63 1.31	8 0.23	1.8 0.03	0.50 0.03	0.08	19	PO ₄ = 0.00 As = 0.00	191	47	<25	23 60	
10-3 1045	1.1	70	6.8	76			16 0.70		0 0.00	177 2.90		10 0.28			0.06			191	46	<25	62 4.6	
11-13 0825	1.6	62	9.2	100			16 0.70		0 0.00	215 3.52		10 0.28			0.09			249	73	<25	21 240	
12-4 0845	2.0	56	8.8	84			17 0.74		0 0.00	232 3.00		13 0.37			0.05			275	85	<25	13 23	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc (TTL); or California Department of Water Resources (DWR), as indicated.

3255-D-8 6-61 200 58

TABLE 9-13
ANALYSES OF SURFACE WATER
LOS ANGELES REGION (NO. 4)
PIRU CREEK NEAR PIRO (STA. 46c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhm/cm at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by			
			ppm	%Sat		Calcium (Ca)	Magnes- ium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	equivalents									Silica (SiO ₂)	Other constituents	
													Chlor- ide (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)									Boron (B)
1-9-62																								
1-9 1300	Dry No flow																							
2-7 1135	25 est.	52	9.6	88	1439	8.1 ^a	136 6.79	48 3.97	118 5.13	5.4 0.14	16 0.56	198 3.24	524 10.91	54 1.52	1.9 0.03	0.7 0.03	2.10	14	538	348	<25	6 <4.5		
2-20 1410	20 est.				1135	7.8 ^b	82 4.03	89 7.28	40 1.76	3.0 0.03	0 0.00	196 3.22	477 9.94	12 0.32	7.0 0.12	0.7 0.04	0.23	7	568	407	500	TTL		
3-8 1435	50 est.	64	9.2	96	1642	7.9 ^a	160 7.98	86 5.42	122 5.31	5.7 0.15	0 0.00	261 4.28	647 13.43	38 1.07	3.1 0.05	1.2 0.06	1.00	26	670	456	100	6 460		
4-3 1325	30 est.	62	11.6	118	939	8.3 ^c	100 4.99	36 2.96	62 2.70	4.2 0.11	19 0.64	137 2.24	344 7.16	18 0.51	4.5 0.07	0.88 0.05	0.60	16	398	254	<25	11.6 118		
5-3 1140	40 est.	70	8.8	98	855	8.2 ^a	94 4.69	33 2.69	45 1.96	3.5 0.09	0 0.00	161 2.64	295 6.15	13 0.37	3.6 0.06	0.9 0.05	0.62	18	369	237	30	6.2 23		
6-6 1100	100 est.	62	9.6	98	918	8.0 ^a			51 2.22		0 0.00	181 2.96		14 0.39		0.52		386	238	<25	0.6 0.6			
7-9 1015	100 est.	60	10.4	103	769	8.3 ^a	88 4.39	26 2.17	43 1.87	3.6 0.09	0 0.00	156 2.56	254 5.30	11 0.31	1.8 0.03	0.7 0.04	0.50	18	328	200	<25	6.2 2.3		
8-8 1015	100 est.	66	10.4	112	804	8.2 ^a			44 1.91		0 0.00	159 2.60		12 0.34		0.66		329	199	<25	2.3 6.2			
9-10 1105	5 est.	72	11.2	130	1481	7.9 ^a	141 7.04	63 5.18	120 5.22	5.8 0.15	12 0.40	290 4.76	541 11.27	33 0.93	0 0.00	1.2 0.06	1.00	17	611	353	<25	6 23		
10-1 0935	15 est.	68	9.2	100	1107	7.9 ^a			72 3.13		0 0.00	224 3.68		23 0.65		0.81		462	278	<25	62 240			
11-13 1140	15 est.	60	10.4	103	1306	8.0 ^a			174 7.57		0 0.00	272 4.46		25 0.71		0.90		535	312	<25	13 23			
12-4 1155	15 est.	58	10.8	105	1455	8.0 ^a			100 4.35		0 0.00	276 4.52		31 0.87		0.91		596	370	<25	13 70			

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-13
ANALYSES OF SURFACE WATER
LOS ANGELES REGION (NO. 4)
RIO HONDO AT WHITTIER NARROWS (STA. 49)

Date and time employed P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 3-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (NO. 4)
PIRU CREEK NEAR PIRU (STA. 466)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmhos at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Tur- bid- ity in ppm	Hardness as CaCO ₃ Total ppm N.C. ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
					Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL) or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (NO. 4)
RIO HONDO AT WHITTIER MARROWS (STA. 49)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by				
					equivalents per million																			
					Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents	
1962																								
1-10 0900	148	58	9.6	93	1120	8.1 ^a	106 4.61			3.6 0.12	150 2.46	291 6.06	89 2.51			0.14			41	334	205	<25	2.3 2.3	DWR
2-13 0925	916	56	8.8	84	297	8.0 ^a	10 0.34	9.7 0.42	4.0 0.10	0 0.00	126 2.06	24 0.49	7 0.20	14 0.23	0.3 0.02	0.08	12		14	127	24	500	240 700	
3-7 1325	181	56	9.2	99	346	8.2 ^a		11 0.43		0 0.00	161 2.64	26 0.54	8 0.23			0.08			14	146	14	75	62 240	
4-3 0805	132	58	11.2	110	1070	7.8 ^a		100 4.35		7.2 0.24	146 2.40	294 6.12	89 2.51			0.14			39	341	209	<25	6 0.6	
5-8 0745	141	64	8.8	92	1086	7.9 ^a	27 2.22	100 4.35	4.8 0.12	0 0.00	161 2.64	288 6.00	90 2.54	2.0 0.03	0.60 0.03	0.14	11	PO ₄ = 0.04 As = 0.00	39	337	205	<25	6.2 13	
6-11 0800	153	66	8.8	95	1097	7.9 ^a		102 4.44		0 0.00	154 2.52	288 6.00	90 2.54			0.15			40	335	209	<25	23 0.6	
7-6 0920	6	72	6.4	73	1179	7.8 ^a	32 2.67	109 4.74	7.2 0.18	0 0.00	246 4.04	226 4.71	108 3.05	2.0 0.15	0.7 0.04	0.23	25		40	358	156	<25	62 240	
8-2 0800	220	76	8.4	99	1152	7.9 ^a	30 2.47	102 4.44	5.2 0.13	0 0.00	144 2.36	308 6.41	96 2.71	2.5 0.04	0.56 0.03	0.15	11		40	335	217	<25	6 6	
9-13 0815	5.2	68	8.4	92	873	7.9 ^a	24 1.93	82 3.57	8.3 0.21	0 0.00	238 3.90	155 3.23	67 1.89	4.4 0.07	1.1 0.06	0.25	24	PO ₄ = 0.5 As = 0.00	38	276	80	<25	6 23	
10-3 1110	150	78	7.6	91	1125	7.9 ^a		100 4.35		0 0.00	145 2.38	301 6.27	94 2.65			0.13			39	341	222	<25	240 240	
11-3 0850	3.4	62	6.0	61.1	952	7.6 ^a		77 3.15		0 0.00	243 3.95		66 1.86			0.22		(All natural flow)	35	315	116	<25	23 130	
12-4 0910	38.6	62	9.6	98	1178	7.9 ^a		102 4.44		0 0.00	163 2.68	302 6.29	96 2.71			0.13			38	356	222	<25	6.2 13.0	

a Field pH.

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs. TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (NO. 4)
SANTA CLARA RIVER AT LOS ANGELES-VENTURA CO. LINE (STA. 46)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ ppm	Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)						
1962	0.6	62	4.4	45	5050	7.9 ^a			650 28.25		0 0.00	525 8.60		322 9.03			1.74		2768 1338	<25	60 4.5	DMR
1-9 1330							276 13.77	193 15.91	546 23.75	8.2 0.21	0 0.00	450 7.33	1840 38.34	266 7.50	0.0 0.00	1.1 0.06	1.84	17				
2-7 1210	1	54	8.8	82	4225	7.9 ^a					0 0.00	214 3.50	293 6.09	46 1.30	5.6 0.09	0.7 0.04	0.26	17	1484 1115	<25	2.3 0.6	DMR
2-8 1600	5.33 GH	53			1015	7.5 ^b	113 5.65	27 2.25	59 2.57	18 0.45	0 0.00	128 2.10	214 4.47	16 0.44	8.2 0.13	0.8 0.04	0.26	12	395 220	12000		
2-9 1611	750 est.	58			665	7.5 ^b	72 3.61	22 1.79	35 1.50	5.6 0.14	0 0.00	128 2.10	214 4.47	16 0.44	8.2 0.13	0.8 0.04	0.26	12	270 105	Tur- bid		USACL
2-20 1125	9.56 GH				1140	8.0 ^b	115 5.75	45 3.67	86 3.75	5.4 0.14	0 0.00	188 3.03	432 9.00	45 1.26	8.0 0.13	0.2 0.05	0.40	17	471 317	Tur- bid		USACL
3-8 1515	18	70	7.6	85	2168	8.1 ^a	217 10.83	84 5.87	176 7.60	9.0 0.23	0 0.00	342 5.60	833 17.35	88 2.46	5.8 0.09	1.1 0.06	0.66	25	885 605	4400	240 240	DMR
4-3 1220	15	72	8.0	92	2252	8.0 ^a			205 8.92		0 0.00	398 6.52	93 2.02			0.70			980 654	<25	23 4.5	
5-3 1210	3	92	6.4	90	2369	8.0 ^a	217 10.83	123 10.15	246 10.70	7.6 0.19	0 0.00	357 5.66	939 22.79	123 3.47	0.2 0.00	1.2 0.06	0.96	23	1049 756	40	62 13	
6-6 1030	2.2	78	8.4	101	3015	7.9 ^a			305 13.27		0 0.00	386 6.32		153 4.31		1.06			880 564	<25	2.3 2.3	
7-9 1100	0.8	88	8.4	114	3553	7.5 ^a	221 11.03	172 14.17	400 17.40	8.1 0.21	0 0.00	366 6.00	1558 32.45	195 5.50	0.3 0.00	1.0 0.05	0.65	26	1260 960	<25	23 62	
8-8 1045	0.4	90	7.6	104	3953	7.7 ^a			450 19.53		0 0.00	368 6.04	222 6.26	222 6.26		1.42			1314 1012	<25	62 23	
9-10 0950	0.9	74	9.2	103	3805	7.7 ^a	128 6.39	245 20.14	490 21.32	7.6 0.19	0 0.00	361 5.92	1740 36.24	224 6.32	5.0 0.03	1.1 0.06	1.30	22	1323 1027	<25	2.3 2.3	
10-1 0900	0.8	72	9.2	104	3709	7.9 ^a			454 19.75		0 0.00	387 6.34	216 6.09	216 6.09		1.38			1307 990	<25	2.3 2.3	
11-13 1100	1.1	62	9.6	99	3887	8.1 ^a			484 21.05		0 0.00	421 6.90	203 5.1	203 5.1		1.30			1336 991	<25	6.2 1.3	
12-4 1120	0.9	66	7.6	77	1140	7.7 ^a			75 3.26		0 0.00	246 4.04	66 1.66	66 1.66		1.62			465 263	<25	0.9 2.3	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Teminal Testing Laboratories, Inc (TTL); or California Department of Water Resources (DWR).

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (NO. 4)
SANTA CLARA RIVER NEAR SANTA PAULA (STA. 46a.)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (microhm/cm at 25°C)	Mineral constituents in parts per million equivalents per million										Total dissolved solids in ppm	Per cent suspended in ppm	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliformly MPN/ml	Analyzed by
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)				
1962																					
1-9 1130	10 est.	10	10.0	100	2443	8.31	5.82	191	0	0	355	2.54	90			1.00		1037	746	<25	21
2-7 0930	20 est.	56	10.9	55	2431	8.14	5.82	194	0	0	300	2.65	94			1.00		1052	806	<25	6
3-8 1330	100 est.	66	9.2	99	1558	7.19	5.99	100	4.9	0	261	5.63	50	5.3	0.7	0.63	27	659	445	150	6
4-3 1500	100 est.	64	11.6	120	1565	4.35	5.35	123	0	0	266	1.41	53	0.09		0.78		673	455	<25	23
5-3 1000	80 est.	72	8.4	95	1847	5.83	5.87	134	5.7	0	292	15.03	66	6.4	1.2	0.94	30	780	541	30	23
6-6 1235	20 est.	74	8.0	93	1951	6.53		150	0	0	296	2.03	72	0.10		0.81		825	582	120	23
7-9 0905	60 est.	78	9.6	118	1819	5.83		134	0	0	289	1.66	52			0.85		770	534	250	6.2
8-8 0820	30 est.	68	10.0	108	1992	6.53		150	0	0	300	4.92	70			0.92		814	568	35	62
9-21 1530	25 est.	74	9.2	103	2165	7.62	7.62	177	6.6	0	331	18.66	78	5.0	1.1	0.88	22	940	669	<25	62
10-1 1205	20 est.	70	9.6	106	2381	8.14		194	0.17	0	333	2.62	93	0.08		1.02		1024	751	<25	6
11-13 1310	30 est.	64	10.0	104	2237	7.57		174	0	0	326	2.26	80			0.94		939	664	<25	23
12-4 1330	30 est.	68	10.8	118	2159	6.52		150	0	0	338	2.26	80			0.72		916	639	<25	62
																					6.2

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in eqm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as $\frac{0.0}{0.00}$ except as shown.

e Derived from conductivity vs. TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 4-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (NO. 4)
SANTA PAULA CREEK NEAR SANTA PAULA (STA. 46e)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by	
			ppm	% Sat		equivalents																	
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
1962																							
1-9 1055	2.2	58	12.4	120	1317	8.0 ^a	20 4.49	41 3.39	120 5.22	0	257 5.86	232 4.84	80 2.26	0.9 0.01	0.5 0.02	0.63	0.42	16	442	149	<25	6 <4.5	DWR
2-7 0900	6.5	52	8.8	79	1041	7.8 ^a	20 4.49	10 0.80	85 3.70	1.8 0.05	301 4.94	232 4.84	53 1.49	0.9 0.01	0.5 0.02	0.42	0.16	16	394	147	<25	0.6 0.6	DWR
2-8 1000	4.22				490	7.9 ^b	70 3.50	10 0.80	20 0.89	2.3 0.06	146 2.40	121 2.58	11 0.30	4.3 0.07	0.4 0.02	0.11	0.15	11	215	95	5800		DWR
2-20 1700	206				605	7.9 ^b	75 3.73	22 1.80	32 1.40	1.7 0.04	145 2.39	171 3.56	16 0.45	3.4 0.55	0.4 0.02	0.15	0.15	14	277	157	Turbid		USACL
3-8 1300	84	58	11.2	108	702	7.9 ^a	80 3.99	26 2.11	31 1.35	1.6 0.04	187 3.06	188 3.92	17 0.48	2.9 0.05	0.3 0.01	0.10	0.17	17	305	152	<25	0.6 2.3	DWR
4-3 1530	54	58	12.0	116	697	8.1 ^a	25 4.74	26 2.11	37 1.61	0	190 3.12	18 0.51	0	0	0	0.14	0	16	307	151	<25	0.46 <0.45	
5-3 0915	19	68	10.0	109	801	8.2 ^a	25 4.74	26 2.11	42 1.83	1.4 0.04	2.2 3.48	216 4.51	23 0.65	0.5 0.01	1.1 0.06	0.20	0	16	341	167	<25	2.3 6.2	
6-6 1300	15	62	10.8	110	828	8.1 ^a	25 4.74	26 2.11	27 2.48	0	200 3.28	30 0.85	0	0	0	0.26	0	16	326	162	<25	0.45 2.3	
7-9 0820	5.1	66	8.8	94	951	7.7 ^a	75 3.74	47 3.90	66 2.87	2.3 0.06	276 4.52	233 4.86	38 1.07	0.0 0.00	0.4 0.02	0.29	0	15	382	156	<25	6.2 2.3	
8-8 0730	4.1	68	9.2	100	1066	8.0 ^a	81 4.04	41 3.37	82 3.57	2.0 0.05	283 4.64	242 5.04	52 1.47	1.5 0.02	0.6 0.03	0.46	0	21	371	139	<25	2.3 62	
9-11 1450	2.6	76	10.8	127	960	8.1 ^a	72 3.59	32 2.63	93 4.05	1.9 0.05	190 3.12	250 5.21	55 1.55	0.0 0.00	0.7 0.04	0.46	0	15	311	139	<25	23 6	
10-1 1235	1.9	72	12.8	142	1039	8.1 ^a	25 4.13	95 4.13	95 4.13	0	227 3.72	59 1.66	0	0	0	0.48	0	155	341	155	<25	0.6 2.3	
11-13 1340	1.9	62	11.6	118	1110	7.7 ^a	25 4.13	99 4.31	99 4.31	0	271 4.44	63 1.78	0	0	0	0.46	0	155	377	155	<25	2.3 1.3	
12-4 1430	3.6	62	10.8	110	1140	7.3 ^a	25 4.13	93 4.05	93 4.05	0	276 4.52	61 1.72	0	0	0	0.41	0	166	392	166	<25	0.45 <0.45	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); Untertates Agricultural Consultants and Laboratories (USACL) as indicated.

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (NO. 4)

SESPE CREEK NEAR FILLMORE (STA. 46d)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen in % sat	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)				
1962																				
1-9 1235	5.5	60	10.0	100	1456	8.0 ^a	121 5.26		4.8 0.15	257 4.22		92 2.79			2.44		35	496	277	DWR
2-7 1035	21	52	10.0	90	1160	8.2 ^a	91 3.76	2.9 0.07	0	207 3.40	355 7.40	58 1.04	0.0	1.7 0.09	1.5		32	424	254	DWR
2-20 1540	750 est.				1867	7.6 ^b	115 5.00	26 0.66	0	347 5.68	868 18.06	15 0.41	16 0.27	0.88 0.05	0.71	11	20	940	656	TTL
3-8 1400	350	56	11.2	106	1004	8.4 ^a	41 2.09	2.5 0.06	0	220 3.60	348 7.25	15 0.42	2.3 0.04	0.7 0.03	0.30	22	16	474	294	DWR
4-3 1400	100 est.	60	9.2	91	922	8.3 ^a	46 2.00		0	195 3.20		18 0.51			0.84		19	415	255	DWR
5-3 1050	54 est.	70	9.2	102	966	8.2 ^a	57 2.78	2.4 0.06	0	183 3.00	319 6.24	24 0.68	0.5 0.01	0.60 0.03	0.80	20	23	406	251	DWR
6-6 1140	24	72	10.4	118	934	8.3 ^a	66 2.87		0	139 2.28		35 0.99			0.85		29	351	237	DWR
7-9 0940	5.5	74	8.8	102	1031	8.1 ^a	80 3.78	3.7 0.09	0	168 2.76	318 6.63	49 1.38	0.2 0.00	1.1 0.06	1.22	11	32	369	231	DWR
8-8 0910	0.4	74	9.6	111	1199	7.8 ^a	100 4.35	4.8 0.12	0	195 3.20	576 12.00	56 1.58	1.5 0.02	1.2 0.06	1.24	17	27	602	442	DWR
9-10 1215	0.6	80	10.4	128	1321	7.7 ^a	106 4.61	4.7 0.12	0	63 2.68	480 9.99	67 1.89	0.4 0.00	1.6 0.08	1.42	10	31	502	368	DWR
10-1 1045	0.7	72	13.6	154	1328	8.2 ^a	104 4.52		0	159 2.60		75 2.12			1.74		32	490	360	DWR
11-13 1220	0.8	60	14.4	146	1307	8.1 ^a	105 4.57		0	173 2.84		90 2.54			1.75		33	462	320	DWR
12-4 1220	2.2	62	15.6	159	1386	7.9 ^a	109 4.74		0	183 3.00		97 2.74			1.82		33	481	331	DWR

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

3255-1-41 6-61 200 390

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (NO. 4)

VENTURA RIVER NEAR VENTURA (STA. 61)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent suspended matter in ppm	Hardness as CaCO ₃ in ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by			
			ppm	%Sat			equivalents per million																		
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Barium (Ba)	Silica (SiO ₂)	Other constituents
1962																									
1-9 0820	0.2	48	6.0	52	1458	7.2 ^a	115 5.74	29 4.86	21 3.96	2.6 0.07	0 0.00	459 7.59	272 5.68	86 2.43	2.5 0.15	0.5 0.02	0.70	22		24	611	235	<25	<4.5 <4.5	DWR
2-6 1500	0.4	60	10.0	100	1188	7.3 ^a	106 5.28	27 2.19	67 2.91	3.3 0.08	0 0.00	334 5.48	235 4.90	72 2.03	15 0.24	0.6 0.03	0.55	22		13	267	0	<25	<0.45 <0.45	DWR
2-16 1215	436	61			830	8.1 ^b	106 5.28	27 2.19	41 1.86	3.3 0.08	0 0.00	201 3.30	176 3.66	39 1.09	11 0.18	0.4 0.02	0.30	14		19	374	209	Turbid		USALL
2-19 1830	1492 est.	52			652	7.4 ^b	69 3.45	30 2.47	33 1.45	4 0.09	0 0.00	166 2.72	344 7.17	26 0.73	11 0.18	0.4 0.02	0.29	7		19	296	190	700		TTL
3-8 0950	16	58	12.0	116	1300	7.9 ^a	149 7.44	45 3.72	68 2.96	3.8 0.10	19 0.64	255 4.18	263 5.48	74 2.12	18 0.29	0.8 0.04	0.49	27		21	558	349	<25	6.2 6.2	DWR
4-5 0850	8.1	62	11.2	114	1140	8.0 ^a	130 6.49	36 2.96	70 3.05	2.0 0.05	0 0.00	268 4.40	263 5.48	14 0.39	19 0.31	0.76 0.04	0.50	22		23	498	278	<25	23 62	
5-3 0800	7.9	62	10.8	110	1082	7.4 ^a	130 6.49	36 2.96	56 2.44	2.0 0.05	0 0.00	273 4.48	263 5.48	53 1.49	19 0.31	0.76 0.04	0.50	22		20	471	247	<25	2.3 2.3	
6-8 0710	7.2	64	6.4	67	1128	7.3 ^a	130 6.49	36 2.96	59 2.57	0 0.00	0 0.00	304 4.98	263 5.48	53 1.49	19 0.31	0.76 0.04	0.48			21	494	244	<25	23 6.2	
7-9 0630	6.3	64	7.2	75	1102	7.3 ^a	130 6.49	36 2.96	59 2.57	0 0.00	0 0.00	294 4.82	263 5.48	51 1.44	19 0.31	0.76 0.04	0.48			21	488	247	<25	23 6.2	
8-6 0900	2.0	70	7.6	85	1272	7.8 ^a	156 7.78	35 2.88	66 2.87	4.6 0.12	0 0.00	337 5.52	309 6.44	63 1.78	2.1 0.03	0.68 0.04	0.57	25		20	530	254	1500	700	
9-11 1220	2.1	78	14.0	168	1065	8.1	118 5.09	38 3.13	64 2.78	3.8 0.07	0 0.00	255 4.18	282 5.88	53 1.49	5.4 0.09	0.7 0.04	0.52	18	PO ₄ = 0.00	23	451	242	<25	1.3 6.2	
10-2 1200	Pond No surface inflow																								
11-13 1520	2.6	62	9.6	97.8	860	7.9 ^a	63 2.74	30 2.04	63 2.74	0 0.00	0 0.00	307 5.04	309 6.44	48 1.35	2.1 0.03	0.68 0.04	0.52			22	488	236	<25	23 6.2	
12-5 1120	0.5	62	10.8	110	1173	7.5 ^a	64 2.78	31 2.18	64 2.78	0 0.00	0 0.00	316 5.18	282 5.88	55 1.55	5.4 0.09	0.7 0.04	0.46			22	507	248	<25	62 6.2	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR). United States Agricultural Laboratories (USAL) as indicated.

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
AMERICAN RIVER AT PAIR OAKS (STA. 224)

Date and time sampled P.S.T.	Discharge in cfs Avg. MD	Temp in °F	Dissolved oxygen		Specific conductance (microhm/cm at 25°C)	pH ^b	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Per- cent sodium	Hardness as CaCO ₃ Total N.C. ppm	Turbidity MPN/ml	Analyzed by			
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)						Boron (B)	Silica (SiO ₂)	Other constituents
1962																								
1/1-31	349				80	7.6	8.1 0.40	2.7 0.22	4.0 0.17		0 0.00	38 0.62						55 ^g	22	31	0		USGS	
2/1-9	422				80	7.3	9.1 0.45	2.6 0.21	4.1 0.18		0 0.00	35 0.57						50 ^g	21	33	4			
2/10-16	4760				76	7.1	7.5 0.37	2.8 0.23	3.7 0.16		0 0.00	32 0.52						52 ^g	21	30	4			
2/17-28	7130				70	7.3	7.3 0.36	2.4 0.20	3.3 0.14		0 0.00	30 0.49						50 ^g	20	28	3			
3/1-31	6900				74	7.2	9.6 0.48	1.4 0.12	3.1 0.13		0 0.00	28 0.46						56 ^g	18	30	7			
4/1-15	5380				75	7.4	11 0.55	0.9 0.07	3.3 0.14		0 0.00	34 0.56						54 ^g	18	31	3			
4/16-30	6140				62	7.2	8.8 0.44	0.7 0.06	3.2 0.14		0 0.00	28 0.46						48 ^g	22	25	2			
5/1-8	4580				56	7.4	6.8 0.34	1.0 0.08	3.2 0.14		0 0.00	24 0.39						46 ^g	25	21	1			
5/9-31	2570				49	7.1	5.2 0.26	2.2 0.18	2.3 0.10		0 0.00	23 0.38						40 ^g	19	22	3			
6/1-30	2090				46	7.4	5.5 0.27	0.6 0.05	2.2 0.10		0 0.00	21 0.34						39 ^g	24	16	0			
7/1-31	--				45	7.3	4.0 0.20	1.5 0.12	2.3 0.10		0 0.00	21 0.34	2.9 0.08			0.0		34 ^g	24	16	0			
8/1-31	3530				47	7.5	5.4 0.27	0.9 0.07	2.1 0.09		0 0.00	24 0.39	2.1 0.06			0.0		40 ^g	21	17	0			
9/1-30	2650				46	7.0	4.9 0.24	1.2 0.10	2.3 0.10	0.5 0.01	0 0.00	20 0.33	1.2 0.03	4.5 0.07	0.2 0.01	0.0	11 0.00	36 ^f 39 ^g	22	17	1			
10/	01continued																							

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

AMERICAN RIVER AT FAIR OAKS (STA. 224)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ⁱ
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silico (SiO ₂)	Other constituents			
1962 1/4 1100			47	72	7.4	9.6	2.4	2.1	0.0	0.0	26	6.2	7.8	0.0							
4/3 1000			50	74	7.0	7.2	2.4	2.1	0.8	0.0	32	8.2	1.4	0.0							
7/2 1000			60	42	6.7	4.1	0.73	2.1	0.0	0.0	20	6.2	2.1	0.0							
10/2 0930			68	44	7.1	4.8	1.2	2.1	0.0	0.0	21	2.4	0.7	0.0							

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
AMERICAN RIVER AT NIMBUS DAM (STA. 22a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhm/cm at 25°C)	pH ^a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform ^b MPN/ml	Analyzed by	
						equivalents																
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)
1962																						
1/9 1530	333	51	12.5	112	7.4 7.6	0.99 ^c		3.1 0.13		0	46 0.75		11 0.31			0.0			49	11	2	Median 62.
2/8 1325	440	52	12.7	115	7.3 7.8	0.79 ^c		2.9 0.13		0	37 0.61		8.1 0.23			0.0			40	10	4	Maximum >7000. Minimum 0.62
3/15 0915	7420	49	12.8	111	7.5 7.6	0.56 ^c		2.2 0.10		0	30 0.49		3.0 0.09			0.0			28	3	15	
4/3 1330	5240	54	11.3	105	7.5 7.6	0.62 ^c		4.1 0.18		0	33 0.54		4.8 0.14			0.0			31	4	10	
5/10 1000	3540	57	10.9	105	7.1 7.3	0.32	1.0 0.08	1.9 0.08	0.7 0.02	0	23 0.38	3.0 0.06	2.5 0.07	0.1 0.00	0.2 0.01	0.0	1.1	ABS 0.0; PO ₄ 0.05	20	1	4	
6/6 1240	2130	64	10.8	113	6.9 7.0	0.54 ^c		2.4 0.10		0	25 0.41		5.5 0.16			0.0			27	7	2	
7/5 0810	2980	60	9.9	99	7.1 7.3	0.34 ^c		2.4 0.10		0	21 0.34		2.6 0.07			0.0			17	0	2	
8/9 0930	3400	68	9.2	101	6.8 7.2	0.34 ^c		3.1 0.13		0	20 0.33		2.6 0.07			0.0			17	1	9	
9/11 0920	2750	67	9.1	99	7.1 7.0	0.32	1.5 0.12	2.3 0.10	0.4 0.01	0	24 0.39	1.0 0.02	5.0 0.14	0.0 0.00	0.1 0.01	0.0	1.2	Ae 0.00; ABS 0.0; PO ₄ 0.05	22	2	5	
10/2 0815	1330	64	9.9	104	7.1 7.3	1.02 ^c		4.0 0.17		0	42 0.69		18 0.51			0.0			51	17	10	
11/7 1010	2930	57	9.0	87	6.9 7.1	0.50 ^c		2.1 0.09		0	26 0.43		1.8 0.05			0.0			25	4	8	
12/3 1100	2460	56	9.9	94	7.1 7.7	1.55 ^c		6.1 0.27		0	60 0.98		29 0.82			0.0			78	29	3	

^a Field pH^b Laboratory pH^c Sum of calcium and magnesium in ppm^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves.^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
AMERICAN RIVER AT SACRAMENTO (STA. 22)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform ^b MPN/ml	Analyzed by ⁱ
						equivalents per million															
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)						
1962	Not Rated																				
1/8 1500		50	11.7	103	7.5 7.5	0.66 ^c		2.5 0.11		0 0.00	37 0.61		3.5 0.10			0.0		33	3	2	Median 62
2/6 1530		48	12.1	104	7.4 7.7	0.69 ^c		3.3 0.14		0 0.00	34 0.56		5.1 0.14			0.0		34	6	2	Maximum 7000, Minimum 0.23
3/5 1520		50	11.5	101	7.3 7.5	0.56 ^c		2.2 0.10		0 0.00	30 0.49		2.0 0.06			0.0		28	3	30	
4/4 1510		57	12.5	120	8.0 7.8	0.66 ^c		2.9 0.13		0 0.00	34 0.56		3.5 0.10			0.0		33	5	6	
5/10 0900		56	10.8	103	7.1 7.4	0.30	1.2 0.10	1.8 0.08	0.9 0.02	0 0.00	22 0.36	4.0 0.08	2.5 0.07	0.2 0.00	0.1 0.01	0.0	11	20	2	10	
6/6 0800		62	9.7	99	6.9 7.1	0.38 ^c		1.8 0.08		0 0.00	21 0.34		1.5 0.04			0.0		19	2	3	
7/5 0730		61	9.5	96	7.1 7.4	0.34 ^c		2.4 0.10		0 0.00	21 0.34		2.2 0.06			0.0		17	0	3	
8/8 1430		70	9.8	110	7.0 7.1	0.32 ^c		2.8 0.12		0 0.00	18 0.30		3.0 0.08			0.0		16	1	5	
9/11 0805		65	8.6	91	7.1 7.0	0.23	1.2 0.10	1.9 0.08	0.5 0.01	0 0.00	21 0.34	0.8 0.02	1.0 0.03	0.2 0.00	0.1 0.01	0.1	11	17	0	1	
10/2 0705		67	8.6	93	7.1 7.3	0.36 ^c		2.6 0.11		0 0.00	22 0.36		4.0 0.11			0.0		18	0	10	
11/7 0900		57	9.1	88	7.0 7.0	0.43 ^c		1.8 0.08		0 0.00	24 0.39		1.8 0.05			0.0		22	2	10	
12/3 1000		55	9.7	91	7.1 7.3	0.46 ^c		2.6 0.11		0 0.00	26 0.43		2.8 0.08			0.0		23	2	4	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
AMERICAN RIVER, MIDDLE FORK NEAR AUBURN (STA. 22b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total N.C. ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ		
			ppm	% Sat			equivalents																	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- sum (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)
1962	218	39	12.8	97	68	7.3 7.3	0.53 ^c		2.5 0.11		0 0.00	30 0.49		3.5 0.10		0.0		49 ^e	17	26	1	2	Median 6.2 Maximum 620. Minimum 0.23	USGS
1/9 0930	859	46	12.0	100	54	7.3 7.3	0.44 ^c		2.5 0.11		0 0.00	24 0.39		3.6 0.10		0.0		39 ^e	20	22	2	6		
2/8 0940	988	48	11.6	100	67	7.4 7.7	0.52 ^c		2.1 0.09		0 0.00	30 0.49		2.1 0.07		0.0		49 ^e	15	26	1	3		
4/3 0930	2670	48	11.5	99	36	7.4 7.1	0.28 ^c		2.0 0.09		0 0.00	17 0.28		2.2 0.06		0.0		26 ^e	24	14	0	12		
5/10 1440	4120	53	11.7	107	28	7.1 7.2	3.2 0.16	0.5 0.01	1.4 0.06	0.3 0.01	0 0.00	12 0.20	1.0 0.02	2.5 0.07	0.0 0.00	0.0 0.00	9.0 PO ₄	24 ^f	22	10	0	8		
6/6 0935	2150	58	11.0	107	26	6.7 7.0	0.20 ^c		1.2 0.05		0 0.00	13 0.21		0.2 0.01		0.0		19 ^e	20	10	0	3		
7/5 1000	470	73	8.5	98	42	7.2 7.5	0.31 ^c		2.4 0.10		0 0.00	20 0.33		3.2 0.09		0.0		31 ^e	24	16	0	2		
8/9 1430	87	77	8.8	106	79	7.4 7.4	0.58 ^c		4.6 0.20		0 0.00	36 0.59		4.0 0.11		0.0		57 ^e	26	29	0	5		
9/11 1140	43	75	9.1	107	87	7.4 7.8	2.9 0.49	2.3 0.19	3.2 0.14	0.7 0.02	0 0.00	37 0.61	6.0 0.12	4.4 0.12	0.0 0.00	0.1 0.01	13 PO ₄	58 ^f 608	17	34	4	5	As 0.00; ABS 0.0; PO ₄ 0.05	
10/2 1015	43	69	9.1	101	100	7.3 7.6	0.80 ^c		4.7 0.20		0 0.00	45 0.74		6.0 0.17		0.1		73 ^e	20	40	3	8		
11/7 1200	480	54	10.8	100	71	7.3 7.3	0.58 ^c		2.7 0.12		0 0.00	33 0.54		2.2 0.06		0.0		52 ^e	17	29	2	3		
12/3 1435	5000	49	12.1	105	47	7.0 7.0	0.34 ^c		2.4 0.10		0 0.00	20 0.33		3.0 0.08		0.0		34 ^e	23	17	1	4		

^a Field pH^b Laboratory pH.^c Sum of calcium and magnesium in ppm^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves^f Determined by addition of analyzed constituents^g Gravimetric determination^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
AMERICAN RIVER, SOUTH FORK NEAR LOTUS (STA. 22c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Mineral constituents in parts per million										Specific conductance (microhmhos at 25°C)	pH ^a	Total dissolved solids in ppm	Per cent suspended in ppm	Hardness as CaCO ₃ in ppm	Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)									Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR); as indicated.

TABLE P-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

ANTELOPE CREEK NEAR MOUTH (STA. 88c)

Date and time sampled P.S.T.	Discharge in cfs Est. by Sampler	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million											Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by		
						equivalents per million																		
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)							Silico (SiO ₂)	Other constituents
1/12 1115	10	45	10.5	87	7.2 8.7	150 ^c		11 0.48		0 0.00	100 1.64		10 0.28			0.0			24	78	0	2	USGS	
2/12 1020	250	50	10.5	93	7.3 7.5	0.61 ^c		3.0 0.13		0 0.00	40 0.66		3.5 0.10			0.0			17	32	0	35		
3/12 1020	10	50	10.1	89	7.3 7.4	1.30 ^c		6.5 0.26		0 0.00	82 1.34		5.0 0.14			0.1			18	65	0	4		
4/9 1020	8	58	9.7	94	7.1 7.5	0.85 ^c		10 0.44		0 0.00	52 0.85		8.2 0.23			0.1			34	43	0	13		
5/1 9910	10	60	9.0	90	7.1 7.1	0.46 ^c	4.9 0.40	8.6 0.37	2.5 0.06	0 0.00	48 0.79	12 0.25	8.0 0.23	0.3 0.00	0.0 0.00	0.2	28	PO ₄ 0.10	98 ^f	29	43	4		15
6/2 084	10	75	6.1	71	7.3 7.2	1.76 ^c		12 0.52		0 0.00	102 1.67		12 0.34			0.3			23	88	4	20		
7/2 1230	8	75	7.5	87	7.3 7.3	1.02 ^c		14 0.61		0 0.00	42 1.51		14 0.39			0.4			27	81	6	8		
8/1 1240	1.0	83	9.4	119	7.4 7.5	1.48 ^c		16 0.70		0 0.00	86 1.41		19 0.54			0.5			32	74	3	5		
9/11 1045	20	68	5.8	63	7.1 7.7	0.70	9.5 0.78	19 0.83	5.0 0.13	0 0.00	92 1.51	18 0.37	21 0.59	1.1 0.02	0.1 0.01	0.5	32	PO ₄ 0.50	172 ^f 186 ^g	34	74	0		17
10/1 1000	20	65	7.8	82	7.4 7.8	1.82 ^c		21 0.91		0 0.00	107 1.75		27 0.76			0.7			33	91	3	30		
11/1 1130	10	60	8.8	88	7.4 7.8	2.00 ^c		13 0.57		0 0.00	134 2.20		24 0.27			0.0			22	100	0	7		
12/10 1150	7	49	10.9	95	7.3 8.2	1.43 ^c		23 0.40		0 0.00	100 1.64		6.8 0.19			0.0			22	71	0	5		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH), Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

ANTELOPE CREEK NEAR RED BLUFF (STA. 88e)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm % Sat	Specific conductance (microhmals at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sediment in ppm	Hardness as CaCO ₃ in ppm		Turbidity in ppm	Coliform MPN/ml	Analyzed by ⁱ
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)			
1/12 1045	47	43	11.2	90	164	7.3 8.0	1.21 ^c	1.11 ^c	0.00	86 1.41		1.1 0.31				0.0			61	0	2	USGS
2/12 1050	566	48	11.0	95	81	7.2 7.5	0.72 ^c	0.13	0.00	32 0.84		1.5 0.04				0.0			36	4	15	
3/12 1050	138	45	12.0	99	101	7.3 7.7	0.76 ^c	0.23	0.00	60 0.98		3.8 0.11				0.1			38	0	10	
4/9 1055	117	57	10.1	97	99	7.5 8.0	0.74 ^c	0.29	0.00	54 0.89		3.2 0.09				0.3			37	0	3	
5/1 0945	126	56	10.5	100	81	7.5 7.8	0.30	0.20	0.00	42 0.69	1.0 0.02	4.0 0.11	0.0 0.00	0.2 0.00		0.0		68 ^f	30	0	2	
6/20 0915	48	76	8.4	93	123	8.1 7.7	0.88 ^c	0.36	0.00	64 1.05		6.0 0.17				0.2			44	0	1	
7/2 1300	NOT SAMPLED																					
8/1 1330	26	81	9.0	112	163	8.2 8.3	1.16 ^c	0.57	0.13	78 1.28		1.1 0.31				0.2			58	0	3	
9/11 1130	21.2	72	10.0	114	170	8.1 8.2	0.60	0.57	0.00	90 1.48	1.0 0.02	9.5 0.27	0.3 0.00			0.0		126 ^f	60	0	4	
10/1 1030	24	66	9.2	98	168	8.0 8.2	1.23 ^c	0.52	0.00	92 1.51		1.2 0.34				0.2			61	0	1	
11/1 1150	41	58	10.3	100	162	7.6 8.1	1.18 ^c	0.48	0.00	87 1.43		7.8 0.22				0.0			59	0	5	
12/7 1315	92	47	11.8	100	110	7.3 8.0	0.82 ^c	0.32	0.00	63 1.03		4.2 0.12				0.0			41	0	0.6	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE P-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

BATTLE CREEK NEAR COTTONWOOD (STA. 88b)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen ppm %Sat	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent sodium	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by			
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Baron (B)	Silica (SiO ₂)	Other constituents
1/11 1325	280	47	10.2	86	147	7.5 7.8	1.19 ^c	7.9 0.34		0 0.00	82 1.34		4.2 0.12				0.0			22	59	0	2	UEGS
2/9 1035	1,530	51	10.5	94	80	7.3 7.4	0.63 ^c	4.3 0.19		0 0.00	42 0.69		1.1 0.03				0.0			23	31	0	20	
3/14 0930	432	48	11.4	98	126	7.5 7.6	0.98 ^c	6.6 0.29		0 0.00	72 1.16		2.0 0.05				0.1			23	49	0	5	
4/11 1130	460	55	10.9	103	107	7.7 7.9	0.86 ^c	6.5 0.28		0 0.00	63 1.03		1.2 0.03				0.3			25	43	0	•	
5/3 1105	470	60	10.0	100	106	7.7 7.8	8.0 0.40	5.9 0.26	1.7 0.04	0 0.00	59 0.97	3.4 0.07	1.5 0.04	0.0 0.00	0.0 0.00	0.0 0.00	0.0	3.2	PO ₄ 0.00	24	40	0	2	
6/8 1250	400	64	9.6	100	114	7.8 7.9	0.88 ^c	6.3 0.27		0 0.00	66 1.05		1.3 0.04				0.1			23	44	0	10	
7/2 1610	230	66	9.5	101	130	8.1 8.1	1.02 ^c	7.9 0.34		0 0.00	74 1.21		1.8 0.05				0.0			25	51	0	2	
8/1 1635	222	69	9.3	102	146	8.0 8.1	1.12 ^c	9.2 0.40		0 0.00	84 1.36		4.3 0.12				0.0			26	56	0	5	
9/11 1430	138	65	10.4	109	156	8.1 8.1	1.2 0.60	7.3 0.40	2.1 0.05	0 0.00	92 1.51	1.0 0.02	2.5 0.07	0.7 0.01	0.1 0.01	0.0	4.5	PO ₄ 0.15	24	60	0	3		
10/1 1305	217	62	11.2	114	152	7.2 8.0	1.15 ^c	9.6 0.42		0 0.00	92 1.51		2.8 0.06				0.2			25	57	0	10	
11/1 1350	277	57	10.4	100	135	7.5 8.0	1.00 ^c	7.8 0.34		0 0.00	81 1.33		1.2 0.03				0.1			25	50	0	•	
12/7 1445	380	50	11.4	101	118	7.7 8.1	0.90 ^c	6.6 0.29		0 0.00	72 1.16		0.5 0.01				0.0			24	45	0	3	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

CENTRAL VALLEY REGION (NO. 5)

[illegible]

Field pH

^b Laboratory pH.

Sum of calcium and magnesium in epm.

Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{\text{except as shown}}$.

Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

a Gravimetric determination.

Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
BEAR RIVER NEAR WHEATLAND (STA. 78)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million								Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)			Ni- trate (NO ₃)	Fluo- ride (F)				Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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^a Field pH.

^b Laboratory pH.

^c Sum of calcium and magnesium in epm

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents.

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Teminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

BIG CREEK ABOVE PINE FLAT DAM (STA. No. 33d)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent calcium in ppm	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁺⁶), reported here as $\frac{0.0}{0.00}$ except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

BIG CHICO CREEK AT CHICO (STA. 85a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million equivalents										Total dissolved solids in ppm	Per cent sodium in ppm	Hardness as CaCO ₃		Turbidity in pbm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)				Boron (B)				Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 8-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

BIG CHICO CREEK NEAR CHICO (STA. 85)

Date and time sampled P.S.T. 1-1982	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sed- iment in ppm	Hardness as CaCO ₃ ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by			
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	equivalents per million								Other constituents		
															Fluo- ride (F)	Boron (B)								Silica (SiO ₂)	
1/11 1405	32	44	12.1	98	197	7.8 8.1	1.46 ^c		13 0.57		0 0.00	26 1.57		12 0.34				0.2			73	0	1	Maximum 2,400.	USGS
2/15 5905	2,530	50	11.6	103	60	7.2 7.3	0.48 ^c		1.2 0.08		0 0.00	30 0.49		1.5 0.04				0.0			24	0	15	Minimum 0.62	
3/15 0910	180	46	11.1	93	100	7.3 7.9	0.80 ^c		5.0 0.22		0 0.00	52 0.85		3.2 0.09				0.1			40	0	3	Median 23.	
4/12 1520	104	59	9.9	97	117	7.7 8.0	1.00 ^c		7.5 0.33		0 0.00	64 1.05		3.2 0.09				0.1			50	0	1		
5/14 1000	48	57	10.1	97	165	7.2 8.0	1.5 0.75	6.2 0.51	1.0 0.44	1.0 0.03	0 0.00	86 1.41	3.0 0.06	8.8 0.25	0.2 0.00			0.1	26	PO ₄ 0.00	63	0	1		
6/18 1525	34	75	8.4	98	187	8.2 8.2	1.36 ^c		13 0.57		0 0.00	27 1.59		2.5 0.27				0.2			68	0	2		
7/17 1445	24	76	8.3	98	204	8.4 8.7	1.48 ^c		14 0.61		4 0.13	100 1.64		10 0.28				0.1		Tot. Alk. 108	74	0	2		
8/20 1500	20	74	8.4	98	212	8.4 8.5	1.52 ^c		17 0.74		6 0.20	104 1.70		12 0.34				0.2		Tot. Alk. 116	76	0	2		
9/19 1450	22	67	9.3	100	214	8.4 8.3	1.7 0.85	8.1 0.67	1.6 0.70	1.0 0.03	4 0.13	106 1.74	5.0 0.10	12 0.34	0.0 0.00		0.2	32	PO ₄ 0.00 Tot. Alk. 114	76	0	3			
10/17 1510	160	54	11.0	102	114	7.4 7.5	0.92 ^c		7.8 0.34		0 0.00	58 0.95		4.0 0.11			0.1				46	0	35		
11/27 1515	220	52	11.4	104	101	7.5 7.6	0.80 ^c		5.5 0.24		0 0.00	54 0.89		3.2 0.09			0.0	0.0			40	0	10		
12/18 1355	990	53	11.2	103	78	7.4 7.8	0.64 ^c		3.5 0.15		0 0.00	45 0.74		1.8 0.05			0.0	0.0			32	0	7		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

BUTTE CREEK NEAR CHICO (STA. 84)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ	
			ppm	% Sat.			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO ₃)	Bicarbonates (HCO ₃)	Sulfates (SO ₄)	Chlorides (Cl)	Nitrate (NO ₃)	Fluoride (F)			Barium (Ba)	Silica (SiO ₂)				Other constituents
1/11 1320	96	44	12.3	100	123	7.5 7.9	1.14 ^c		2.7 0.16		0 0.00	76 1.25		2.3 0.06					57	0	1	Maximum 620.	USGS	
2/15 1000	3,900	49	11.1	97	59	7.1 7.7	0.52 ^c		1.5 0.07		0 0.00	32 0.52		1.4 0.04				26	0	140	Minimum 0.23			
3/15 0825	441	45	11.5	95	85	7.3 7.9	0.78 ^c		2.7 0.12		0 0.00	46 0.75		2.0 0.06				39	1	3	Median 9.6			
4/12 1400	571	56	10.4	101	65	7.5 7.8	0.50 ^c		4.2 0.18		0 0.00	37 0.61		0.8 0.02				30	0	8				
5/14 1050	415	51	10.3	97	65	7.3 7.8	1.2 0.36	2.4 0.27	2.8 0.12	0.3 0.1	0 0.00	39 0.54	1.0 0.02	1.5 0.04	0.1 0.00	0.1 0.01	0.0	1.0	28	0	4			
6/19 0730	216	64	9.3	94	81	7.3 7.8	0.78 ^c		2.7 0.12		0 0.00	48 0.79		1.5 0.04				34	0	8				
7/17 1400	146	71	8.8	99	96	8.1 8.6	0.88 ^c		3.4 0.15		0 0.00	26 0.32		0.8 0.02				44	0	3				
8/20 1400	119	70	9.5	106	102	8.3 8.8	1.32 ^c		4.0 0.17		0 0.00	63 1.03		1.4 0.04				46	0	1				
9/19 1400	115	64	10.2	105	106	8.3 8.8	1.4 0.70	2.4 0.20	3.8 0.17	1.2 0.03	0 0.00	66 1.06	0.0 0.00	0.5 0.01	0.4 0.01	0.0 0.00	21	45	0	4				
10/17 1430	470	53	10.9	100	82	7.2 7.4	0.78 ^c		2.7 0.12		0 0.00	44 0.72		1.0 0.03			0.3	39	3	40				
11/27 1425	430	53	11.0	97	84	7.3 7.8	0.74 ^c		2.6 0.11		0 0.00	47 0.77		1.5 0.04			0.0	37	0	15				
12/18 1440	1,260	52	10.7	97	74	7.3 7.5	0.64 ^c		1.8 0.08		0 0.00	44 0.72		0.6 0.02			0.0	32	0	20				

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 9-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
CACHE CREEK NEAR CAPAX (STA. 80)

Date and time sampled P.S.T.	Discharges in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbon- ates (CO ₃)	Bicar- bonates (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico- n (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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^a Field pH.

^b Laboratory pH.

^c Sum of calcium and magnesium in ppm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents.

^g Gravimetric determination

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DMR); as indicated.

TABLE 9-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
CACHE CREEK NEAR LOWER LAKE (STA. 42)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen	Specific conductance (micromhos at 25°C)	pH ^a b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ			
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents		
1962																									
1/4 1140	1.3	44	11.0	90	274	7.5 8.0		12 0.52		0 0.00	152 2.49		6.5 0.18			0.7			152 ^e	17	129	4	20	Median 23. Maximum 27000. Minimum 0.13	USGS
2/1 0950	3.1	42	11.1	88	291	7.5 8.0		13 0.57		0 0.00	148 2.43		9.5 0.27			0.6			162 ^e	18	129	8	4		
3/6	Not Sampled																								
4/3 1010	5.8	57	9.9	96	293	7.9 8.1		13 0.57		0 0.00	166 2.72		7.0 0.20			1.0			163 ^e	18	132	0	8		
5/2 0935	335	66	9.0	96	288	7.7 7.8		12 0.52	2.3 0.06	0 0.00	162 2.66	8.6 0.18	7.0 0.20	0.7 0.01	0.2 0.01	1.0	7.4	PO ₄ 0.10; ABS 0.0	160 ^f	17	128	0	10		
6/5 0915	383	65	8.9	94	286	8.1 8.1		12 0.52		0 0.00	165 2.70		7.2 0.20			1.0			159 ^e	17	127	0	30		
7/5 1240	444	80	7.5	93	287	8.2 8.1		13 0.57		0 0.00	167 2.74		8.0 0.23			0.8			159 ^e	18	128	0	25		
8/2 1240	359	80	7.6	94	295	8.2 8.0		12 0.52		0 0.00	178 2.92		4.0 0.25			0.9			164 ^e	16	134	0	7		
9/4 1315	264	77	7.8	94	311	8.5 7.9		14 0.61	2.5 0.06	0 0.00	192 3.15	9.0 0.19	7.2 0.20	0.2 0.00	0.0 0.00	0.8	1.3	As 0.01; ABS 0.0; PO ₄ 0.00	186 ^f 1728	18	138	0	15		
10/1 1145	45	68	8.5	93	327	8.1 7.5		24 1.04		0 0.00	198 3.25		8.2 0.23			1.0			181 ^e	27	141	0	15		
11/1 1250	2.7	59	8.0	79	238	7.5 7.5		11 0.48		0 0.00	128 2.10		5.5 0.15			0.6			132 ^e	19	102	0	10		
12/4 1150	2.8	52	10.1	91	277	7.5 7.6		13 0.57		0 0.00	141 2.31		9.7 0.27			0.7			154 ^e	20	116	0	9		

^a Field pH

^b Laboratory pH

^c Sum of calcium and magnesium in ppm

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents.

^g Gravimetric determination

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
CACHE CREEK, NORTH FORK NEAR LOWER LAKE (STA. 79)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sed- iment in ppm	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ			
			ppm	% Sol			equivalents																		
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents
1962																									
1/4 1045	24	48	14.5	125	556	7.9 8.4	4.08 ^c		42 1.83		6 0.20	212 3.47		58 1.84			4.4		315 ^e	31	204	20	2	Median 13- Maximum 230- Minimum 0.23	USGS
2/1 0855	43	42	11.6	92	471	7.9 8.2	3.45 ^c		34 1.48		0 0.00	205 3.36		42 1.18			3.0		267 ^e	30	172	4	3		
3/6 1200	2660	47	11.0	93	143	8.0 7.8	1.28 ^c		5.7 0.25		0 0.00	76 1.25		3.5 0.10			0.2		81 ^e	16	64	2	120		
4/3 0930	190	55	10.4	98	275	7.9 8.3	2.52 ^c		14 0.61		2 0.07	146 2.39		10 0.28			1.6		156 ^e	19	126	3	2		
5/2 0830	59	63	9.9	102	396	8.1 8.2	31 1.55	21 1.73	22 0.96	1.2 0.03	0 0.00	202 3.31	13 0.27	22 0.62	0.3 0.00	0.0 0.00	1.8	17 PO ₄ 0.00	229 ^f	22	164	0	1		
6/5 0830	24	64	10.5	110	471	8.4 8.5	3.73 ^c		31 1.35		10 0.33	207 3.39		37 1.04			2.5		267 ^e	27	187	0	2		
7/5 1130	2.1	81	9.2	115	497	7.5 8.5	3.72 ^c		37 1.61		12 0.40	195 3.20		46 1.30			3.6		282 ^e	30	186	6	3		
8/2 1135	2.3	82	9.3	118	531	8.3 8.4	3.92 ^c		44 1.91		7 0.23	212 3.47		57 1.61			4.2		301 ^e	33	196	9	3		
9/4 1155	1.5	80	11.3	140	562	8.4 8.5	35 1.75	27 2.23	48 2.09	1.9 0.05	18 0.60	193 3.16	19 0.40	63 1.78	0.4 0.01	0.1 0.01	4.2	19 PO ₄ 0.00	331 ^f 322 ^g	34	199	11	2		
10/1 1050	1.6	68	10.7	117	542	8.3 8.2	3.77 ^c		44 1.91		0 0.00	226 3.70		56 1.58			3.9		307 ^e	34	188	3	10		
11/1 1155	26	62	11.3	116	631	8.5 8.4	4.58 ^c		49 2.13		12 0.40	245 4.02		70 1.97			5.2		358 ^e	32	229	8	1		
12/4 1240	185	56	10.7	102	331	7.9 8.2	2.46 ^c		23 1.00		0 0.00	163 2.67		25 0.71			2.3		188 ^e	29	123	0	2		

^a Field pH.^b Laboratory pH.^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves.^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

CACHE SLOUGH BELOW LINDEEY SLOUGH (STA. 110a)

Date and time sampled P.S.T.	Discharge Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent acid-soluble	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ^h
		ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)	Other constituents			
1962 Tidal																					USBR
1/23 0955	44			206				15					11								32
4/20 1040	61			130				9.2					8.5								40
7/18 1130	73			184				14					13								33
10/15 1145	64			216				17					18								34

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBOPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

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TABLE H-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
CALAVERAS RIVER AT JENNY LIND (STA. 16a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by ^c
			ppm	% Sat			equivalents per million																
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico- nium (SiO ₂)			
1962																							
1/11 0905	9.9	44	10.8	88	364	7.6 8.1	3.21 ^c		12 0.52		0 0.00	125 2.05		16 0.45				0.1			4	Median 9.5 Maximum 2400 Minimum 0.23	USGS
2/15 1000	3710	52	10.8	98	131	7.2 7.7	1.13 ^c		4.3 0.19		0 0.00	54 0.89		3.6 0.10				0.1			60		
3/8 1015	2640	53	11.5	105	130	7.6 7.5	1.06 ^c		4.8 0.21		0 0.00	56 0.92		4.4 0.12				0.0			30		
4/4 1005	5.3	64	7.6	80	361	7.4 8.5	3.21 ^c		15 0.65		9 0.30	140 2.29		21 0.59				0.2			1		
5/7 0950	2.0	73	11.4	132	342	8.2 8.2	37 1.85	14 1.19	14 0.61	2.6 0.07	0 0.00	160 2.62	29 0.50	14 0.39	0.1 0.00	0.2 0.01		0.0	16 PO ₄	2			
6/5 0850	257	64	9.8	103	201	7.4 8.0	1.80 ^c		6.7 0.29		0 0.00	102 1.67		5.0 0.11				0.0			10		
7/9 1025	1.6	80	7.8	97	247	7.4 8.1	2.22 ^c		8.7 0.38		0 0.00	129 2.11		7.0 0.20				0.1			3		
8/1 1145	Not Sampled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/5 1235	Not Sampled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/2 1050	Not Sampled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/13 1135	37	60	8.5	85	354	7.5 8.0	3.11 ^c		12 0.52		0 0.00	161 2.64		16 0.45				0.0			1		
12/6 1045	3.2	52	7.7	70	343	7.3 8.1	3.03 ^c		12 0.52		0 0.00	152 2.49		16 0.45				0.1			1		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
CALAVERAS RIVER NEAR STOCKTON (STA. 16b)

Date and time sampled P.S.T.	Discharge Temp in cfs	Dissolved oxygen	Specific Conductance (micro-mhos at 25°C)	Mineral constituents in parts per million equivalents per million										Total dissolved solids in ppm	Per cent solids in ppm	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)	Other constituents			
1962																			
1/11 1015	Not Sampled	Dry																	USGS
2/15 1120	4300	52	129	1.06 ^e		4.2 0.18		0 0.00	49 0.80		3.8 0.11			0.1			83 ^e	15	52
3/8 1125	2340	52	127	1.14 ^e		3.9 0.17		0 0.00	57 0.93		3.4 0.10			0.1			81 ^e	13	57
4/4 1110	3.4	64	83	0.55 ^e		5.1 0.22		0 0.00	32 0.25		9.0 0.25			0.2			53 ^e	29	27
5/7 1200	Not Sampled	Dry																	
6/5 1000	5.6	68	214	1.80 ^e		7.3 0.32		0 0.00	103 1.69		8.0 0.23			0.0			137 ^e	15	90
7/9 1200	Not Sampled	Dry																	
8/1 1400	Not Sampled	Dry																	
9/5 1330	Not Sampled	Dry																	
10/2 1135	Not Sampled	Dry																	
11/13 1305	Not Sampled	Dry																	
12/5 1300	Not Sampled	Dry																	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 8-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

CHUACHILLA RIVER AT BUCHANAN DAM SITE (STA. NO. 114)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sodium in ppm	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by
			ppm	%Sat			equivalents																
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potass- ium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)			
1962																							
1/8 1200	3.2	47	12.5	106	714	8.2	3.77 ^c	69 3.00		0.0 0.00	108 1.77		161 4.54			0.1			4	187	98		Median 6.2 Maximum 62. Minimum 0.62
2/5 1235	8.1	53	10.8	99	462	7.9	2.49 ^c	42 1.83		0.0 0.00	98 1.61		86 2.43			0.0			10	124	44		
3/5 1645	150 est.	52	10.2	93	154	7.7	0.98 ^c	11 0.48		0.0 0.00	61 1.00		12 0.34			0.1			9	49	0		
4/9 1205	---	71	8.7	99	167	8.0	1.04 ^c	14 0.61		0.0 0.00	73 1.20		13 0.37			0.0			3	52	0		
5/7 1210	30	75	8.6	101	197	8.0	0.35 ^c	18 0.78	2.2 0.06	0.0 0.00	79 1.29	3.0 0.06	20 0.56	0.1 0.00	0.2 0.01	0.0	32	PO ₄ 0.10	3	58	0	3	
6/7 1345	2.8	84	7.4	94	245	8.1	1.34 ^c	22 0.96		0.0 0.00	87 1.43		33 0.93			0.0			15	67	0	15	
7/12 1210	---	79	8.0	98	859	7.9	1.16 ^c	85 3.70		0.0 0.00	114 1.87		209 5.90			0.1			10	208	115	10	
8/	No sample collected.																						
9/	No sample collected.																						
10/	No sample collected.																						
11/8 1345	---	65	10.1	107	640	8.0	3.40 ^c	54 2.33		0.0 0.00	119 1.93		136 3.84			0.0			1	170	72	1	
12/6 1235	2	50	10.8	96	628	8.0	3.27 ^c	56 2.44		0.0 0.00	112 1.54		137 3.86			0.0			1	163	71	1	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (No. 5)

CLEAR CREEK NEAR IGO (STA. 124)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (microhm/cm at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total in ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by	
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)
1/11 1100	106	40	12.4	95	124	7.2 7.3	0.86 ^c	6.6 0.29		0 0.00	4.5 0.74		8.7 0.25				0.0			43	6	2	USGS
2/9 0830	3,620	49	11.4	99	58	7.0 7.1	0.47 ^c	2.8 0.12		0 0.00	26 0.43		1.2 0.03				0.0			24	3	140	
3/14 1210	638	45	12.1	100	75	7.2 7.4	0.56 ^c	3.2 0.14		0 0.00	32 0.52		2.5 0.07				0.0			28	2	8	
4/11 1425	480	56	10.2	97	66	7.3 7.7	0.56 ^c	3.7 0.16		0 0.00	28 0.46		3.8 0.11				0.0			28	5	2	
5/3 1440	254	63	9.5	98	78	7.4 7.5	0.88 0.44	4.5 0.20	0.7 0.02	0 0.00	32 0.52	6.0 0.12	4.8 0.14	0.0 0.00	0.1 0.01		0.0	18	PO ₄ 0.00	28	2	1	
6/8 0800	111	63	9.2	95	101	7.3 7.8	0.60 ^c	6.2 0.27		0 0.00	43 0.70		5.8 0.16				0.0			40	5	1	
7/3 1630	57	75	8.5	99	134	8.0 7.5	0.87 ^c	2.3 0.41		0 0.00	50 0.82		11 0.31				0.0			43	2	20	
8/3 1000	27	75	8.3	97	188	8.1 7.8	1.14 ^c	16 0.70		0 0.00	60 0.98		21 0.59				0.0			57	8	2	
9/14 0825	24	67	8.6	92	214	7.5 7.9	1.8 0.90	4.3 0.35	1.1 0.03	0 0.00	68 1.11	11 0.23	26 0.73	0.0 0.00	0.0 0.00		0.0	11	PO ₄ 0.00	63	7	5	
10/2 0900	35	65	8.6	91	192	7.4 7.6	1.19 ^c	16 0.70		0 0.00	62 1.02		21 0.59				0.0			59	8	3	
11/2 1030	30	57	10.5	101	149	7.4 7.5	1.12 ^c	2.3 0.40		0 0.00	54 0.87		10 0.28				0.1			56	12	25	
12/7 0930	270	48	11.9	103	99	7.0 7.8	0.71 ^c	6.0 0.26		0 0.00	41 0.67		4.8 0.14				0.0			35	1	35	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in cpm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR); as indicated.

TABLE 3-34

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
CLEAR LAKE AT LAKEPORT (STA. 41)

Date and time sampled P.S.T.	Discharge Temp in cfs	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sediment in ppm	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by ⁱ		
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Barium (Ba)	Silica (SiO ₂)
1962																					
1/4 1320	50	8.8	281	2.72 ^c		11 0.48		0	156 2.56		6.2 0.17					0.7		15	136	20	Median 2.4
2/1 1120	45	10.8	288	2.59 ^c		12 0.52		0	163 2.67		9.0 0.25					0.9		17	129	15	Maximum 7000.
3/6 1405	46	10.2	232	2.01 ^c		9.3 0.40		0	127 2.08		5.5 0.16					0.6		16	102	25	Minimum 0.046
4/3 1130	62	10.9	241	2.20 ^c		11 0.48		1 0.03	136 2.23		5.0 0.11					0.7		18	110	0	
5/2 1100	65	9.0	258	2.22	15 1.20	11 0.48	1.9 0.05	0	144 2.36	8.8 0.18	5.9 0.17	1.0 0.02	0.2 0.01		11	PO ₄ 0.10; ABS 0.0	17	115	0	8	
6/5 1010	68	9.1	264	2.37 ^c		11 0.48		0	147 2.41		6.6 0.19					0.2		17	118	0	
7/5 1405	75	8.1	277	2.44 ^c		12 0.52		0	162 2.66		7.5 0.21					0.8		18	122	0	
8/2 1400	82	7.8	284	2.60 ^c		13 0.57		0	173 2.84		9.1 0.26					1.0		18	130	0	4
9/4 1510	78	15.0	286	2.6	16 1.34	13 0.57	2.4 0.02	0	182 2.72	2.0 0.19	6.0 0.17	0.1 0.00	0.1 0.01		18	As 0.00; ABS 0.0; PO ₄ 0.30	17	132	0	35	
10/1 1310	77	14.7	308	2.86 ^c		14 0.61		0	172 2.82		8.3 0.23					0.1		18	143	2	
11/1 1400	68	4.6	291	2.59 ^c		12 0.52		0	172 2.82		6.2 0.17					1.0		17	129	0	25
12/4 0955	54	7.8	289	2.55 ^c		12 0.52		0	169 2.77		8.4 0.24					0.8		17	127	0	15

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE F-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

COLUSA TROUGH NEAR COLUSA (STA. 87)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent solids in ppm	Hardness as CaCO ₃ ppm	Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ		
			ppm	% Sat			equivalents per million																	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- tate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)
1/12 1035	262	46	10.6	89	1,260	8.0 8.1	5.83 ^c		167 7.26		0 0.00	296 4.85		115 3.24		0.3			55	232	49	45	Maximum 7,000 ^a	USGS
2/15 1215	2,730	52	9.1	83	297	7.7 7.3	1.33 ^c		36 1.57		0 0.00	85 1.39		17 0.48		0.2			53	70	0	40	Minimum 0.4	
3/15 1220	337	56	9.2	88	1,170	8.1 8.0	5.86 ^c		151 6.57		0 0.00	291 4.77		98 2.70		0.3			53	293	54	100	Median 230.	
4/13 1030	327	67	8.1	87	531	7.9 7.9	3.86 ^c		56 2.44		0 0.00	166 2.72		36 1.02		0.1			44	154	18	100		
5/7 0945	1,120	74	7.1	83	415	7.7 8.2	2.2	1.10	48 2.09	2.4 0.06	0 0.00	148 2.43	56 1.17	22 0.62	0.0 0.00	0.3 0.02	0.3	16 PO ₄ 0.35	48	112	0	35	251 ^f	
6/18 1245	700	81	7.1	82	428	7.7 7.7	2.36 ^c		52 2.26		0 0.00	168 2.75		24 0.69		0.2			49	118	0	60		
7/17 1025	612	78	6.8	82	486	7.7 8.1	2.86 ^c		53 2.31		0 0.00	203 3.33	51 1.06	24 0.68		0.1			45	144	0	15		
8/20 1020	856	75	7.1	83	448	7.6 7.9	2.76 ^c		49 2.13		0 0.00	207 3.39	39 0.81	21 0.59		0.2			44	138	0	30		
9/19 1030	675 (est.)	70	7.4	82	513	7.6 8.5	2.2	1.45	57 2.48	2.0 0.05	5 0.17	203 3.33	57 1.19	28 0.79	1.6 0.03	0.2 0.01	0.2	21 Tot. Alk. 213 PO ₄ 0.40	44	154	0	7	321 ^f 323 ^g	
10/17 1025	No Record	56	7.7	73	692	7.5 7.7	3.45 ^c		84 3.65		0 0.00	200 3.28	48 1.35			0.2			51	172	8	85		
11/27 1100	154	54	9.8	91	1,130	8.1 8.2	5.68 ^c		150 6.52		0 0.00	329 5.39	186 3.87	92 2.79		0.3			53	284	14	40		
12/18 1115	1,174	55	8.3	78	696	7.5 8.1	2.91 ^c		90 3.92		0 0.00	164 2.69	135 2.81	49 1.38		0.3			57	146	12	300		

a Field pH

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs. TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO.5)

CONTRA COSTA CANAL AT let PUMP LIFT (STA. 109a.)

Date and time sampled P.S.T.	Discharge Temp in °F	Specific conductance at 25°C	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent total solids in ppm	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by
				Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO ₃)	Bicarbonates (HCO ₃)	Sulfates (SO ₄)	Chlorides (Cl)	Nitrate (NO ₃)	Fluoride (F)	Barium (Ba)	Silica (SiO ₂)				
1962																			
1/22	42		7.4	59	34	90	3.9	0.0	115	169	138	14							USBR
1/35		980																	
2/12	52		7.6	56	33	90	3.9	0.0	115	160	146	9.3		0.54					
1/40		941																	
3/12	54		7.4	36	22	73	2.7	0.0	109	116	95	4.3							
1/25		742																	
4/18		436	8.1	22	13	42	1.6	0.0	80	56	55	1.2							
1000																			
5/16	64		6.8	12	7.8	18	1.6	0.0	54	21	20	0.62							
12/45		213																	
6/18	73		7.4	15	7.2	18	1.3	0.0	68	24	26	0.0							
0920		252																	
7/16	77		7.6	14	8	18	1.2	0.0	68	24	22	0.62							
1500		222																	
8/20	77		7.8	14	12	35	1.6	0.0	76	29	48	0.0							
1205		339																	
9/20	70		7.6	22	11	51	2.3	0.0	80	32	84	0.0							
0940		465																	
10/17	62		7.5	22	13	44	2.0	0.0	96	44	58	1.2							
11/20		406																	
11/14	59		7.5	24	19	55	2.3	0.0	108	58	82	1.9							
11/15		565																	
12/17	54		7.6	32	18	75	2.3	0.0	115	72	114	1.2							
1355		674																	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 9-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
COSUMES RIVER AT McCONNELL (STA. 94a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen	Specific conductance (microhmhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ in ppm	Turbidity in ppm	Conformity MPN/ml	Analyzed by
			ppm		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)				
1962																				
1/8 1045	3.0	44	11.9	101	7.1 7.5	0.84 ^e	3.9 0.17		0 0.00	4.9 0.80		4.5 0.13			0.0		42	2	3	USGS
2/6 1120	19	46	11.9	102	7.4 7.7	0.84 ^e	4.8 0.21		0 0.00	4.5 0.74		3.1 0.09			0.0		42	5	6	
3/5 1330	610	53	10.9	116	7.3 7.7	0.93 ^e	5.1 0.22		0 0.00	5.0 0.85		3.8 0.11			0.0		46	3	15	
4/4 1110	694	57	10.3	99	7.3 7.5	0.44 ^e	3.5 0.15		0 0.00	2.9 0.78		1.5 0.04			0.0		22	0	32	
5/10 0545	510	62	9.4	42	7.1 7.4	0.7 0.24	2.2 0.10	0.7 0.02	0 0.00	2.2 0.36	0.0 0.00	2.0 0.06	0.0 0.00	0.1 0.01	0.0	1.5	15	0	10	
6/6 1445	124	76	8.6	48	7.1 7.2	0.37 ^e	2.3 0.10		0 0.00	2.2 0.41		1.6 0.05			0.0		18	0	2	
7/5 1400	Not Sampled	Dry																		
8/8 1340	Not Sampled	Dry																		
9/11 1600	Not Sampled	Dry																		
10/2 1330	Not Sampled	Dry																		
11/8 1400	16	60	10.5	134	7.4 7.8	1.08 ^e	5.3 0.23		0 0.00	6.9 1.13		2.8 0.08			0.0		54	0	5	
12/6 1340	74	50	11.2	116	7.3 7.8	0.95 ^e	4.9 0.21		0 0.00	5.8 0.95		4.6 0.13			0.1		47	0	8	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in apm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
COSUMES RIVER AT MICHIGAN BAR (STA. 94)

Date and time sampled P S T	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by ^c																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ates (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (No. 5)

COTTONWOOD CREEK NEAR COTTONWOOD (STA. 126)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in equivalents per million								Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total N.C. ppm	Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by i						
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)							Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)	Other constituents	
1/11 1250	120	48	11.2	97	272	7.3 8.0	2.27 ^c	12 0.52		0 0.00	118 1.93		18 0.51				0.0				19	114	17	1	Maximum 2,400.	USGS
2/9 1000	2,600	51	10.2	91	173	7.5 7.5	1.39 ^c	8.6 0.37		0 0.00	73 1.23		6.4 0.18				0.0				21	70	8	250	Minimum 0.23	
3/14 1000	930	48	10.9	94	238	7.5 7.8	2.08 ^c	9.0 0.39		0 0.00	116 1.90		7.0 0.20				0.0				16	104	9	10	Median 62.	
4/11 1205	920	61	9.5	96	177	7.5 8.2	1.56 ^c	6.4 0.28		0 0.00	90 1.48		7.0 0.20				0.1				15	79	5	15		
5/3 1150	403	68	9.6	104	194	7.7 7.9	2.1 1.05	8.2 0.36	1.3 0.63	0 0.00	101 1.65	9.0 0.19	6.7 0.19	0.0 0.00	0.1 0.01	0.1	20	PO ₄ 0.00	125 ^f	17	86	3	1			
6/8 1335	330	78	8.4	101	201	7.7 7.8	1.82 ^c	7.9 0.34		0 0.00	100 1.79		5.5 0.16				0.0				16	91	2	5		
7/3 1340	82	78	9.2	111	201	7.5 8.2	1.71 ^c	9.1 0.40		0 0.00	112 1.84		7.8 0.22				0.0				19	85	0	5		
8/2 1415	60	81	10.3	129	178	7.8 7.7	1.18 ^c	9.1 0.40		0 0.00	99 1.62	5.0 0.10	4.0 0.11	0.1 0.00	0.1 0.01	0.0	27	PO ₄ 0.00	119 ^f 120 ^g	21	74	0	1			
9/14 1045	58	70	9.7	108	174	7.3 8.1	1.5 0.75	8.6 0.37	1.0 0.63	0 0.00	99 1.62		4.0 0.11	0.1 0.00	0.1 0.01	0.0				20	73	0	5			
10/2 1155	90	68	11.0	120	170	7.4 8.0	1.42 ^c	8.6 0.37		0 0.00	96 1.57		6.6 0.19				0.0			21	71	0	3			
11/1 1435	125	57	10.8	104	255	8.0 8.0	2.18 ^c	9.2 0.43		0 0.00	134 2.20		12 0.34				0.1			17	108	0	1			
12/7 1130	500	49	11.4	99	245	7.7 8.3	2.23 ^c	9.6 0.42		1 0.03	125 2.05		10 0.28				0.1	Tot. Alk. 128		16	111	0	10			

a Field pH

b Laboratory pH.

c Sum of calcium and magnesium in eqm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBGCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBOPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

CENTRAL VALLEY REGION (NO. 5)

COTTONWOOD CREEK BELOW NORTH FORK COTTONWOOD CREEK (STA. 11a)

Date and time sampled P.S.T. -582	Discharge in cfs Est. by Sewer	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/h	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total N.C. ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by 1			
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	equivalents per million									Other constituents		
														Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)								Boron (B)	Silico (SiO ₂)
1/11 1135	30	41	11.5	90	247	7.5 6.1	2.10 ^c	10 0.44	0 0.00	119 1.95	12 0.34		0.0	0.0	17	108	10	2	USGS						
2/2 1345	204	50	10.4	92	183	7.6 7.5	1.52 ^c	7.2 0.34	0 0.00	81 1.33	2.3 0.09		0.0	0.0	18	78	12	250							
3/14 1245	250	46	11.4	96	203	7.7 7.9	1.84 ^c	6.4 0.28	0 0.00	106 1.74	3.8 0.11		0.0	0.0	13	92	5	15							
4/11 1500	100	64	9.4	96	165	7.7 6.2	1.54 ^c	4.7 0.20	0 0.00	91 1.49	1.4 0.04		0.0	0.0	11	77	2	20							
5/3 1545	100	73	8.5	98	201	8.1 8.2	2.1 1.05	5.7 0.25	1.0 0.03	113 1.85	6.6 0.19		0.0	1.9 0.00	128 ^f	96	3	1							
6/8 0900	80	70	8.3	92	222	8.1 8.2	2.06 ^c	6.7 0.29	0 0.00	128 2.10	5.5 0.16		0.0	0.0	12	103	0	2							
7/3 1535	35	83	8.2	104	231	8.1 8.2	2.07 ^c	8.1 0.35	0 0.00	127 2.08	8.5 0.24		0.0	0.0	14	103	0	1							
8/3 0915	18	75	8.7	101	262	8.0 8.1	2.32 ^c	10 0.44	0 0.00	146 2.39	10 0.28		0.0	0.0	16	116	0	2							
9/14 0900	18	70	8.3	92	279	7.8 8.2	2.8 1.40	11 0.48	1.1 0.05	140 2.44	16 0.45		0.0	0.0 0.00	170 ^f 169 ^g	122	0	5							
10/2 1015	30	69	9.3	102	266	7.7 8.7	2.22 ^c	14 0.61	0 0.00	132 2.16	20 0.56		0.0	0.0	22	111	3	1							
11/2 1100	30	60	10.0	100	260	7.4 6.1	2.34 ^c	9.2 0.40	0 0.00	142 2.33	9.5 0.27		0.2	0.2	15	117	1	1							
12/7 1015	100	48	11.8	102	249	7.9 8.3	2.33 ^c	8.0 0.35	2 0.07	136 2.23	7.1 0.20		0.0	0.0	13	117	2	5							

 $\sigma_{\text{Field}} \approx 0.1$

b Laboratory pH

c Sum of calcium and magnesium in epm.

Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.0}$ except as shown.

e Derived from conductivity vs TDS curves

Determined by addition of analyzed constituents.

Gravimetric determination.

Annual median and range

Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBCPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

COTTONWOOD CREEK, SOUTH FORK ABOVE COTTONWOOD CREEK (STA. 11b)

Date and time sampled P.S.T. 1962	Discharge in cfs Est. by Sampler	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by i							
			ppm	% Sol			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico dioxide (SiO ₂)	Other constituents				
1/11 1205	13	45	12.2	101	423	7.5 8.1	3.22 ^c		22 0.96		0.0 0.00	137 2.25		4.6 1.30			0.0	0.0		23	161	49	1						USGS
2/9 1205	200+	51	10.3	92	166	7.7 7.5	1.35 ^c		8.7 0.38		0.0 0.00	71 1.15		7.6 0.21			0.0	0.0		22	68	10	350						
3/14 1320	125	53	10.6	97	387	7.9 8.1	3.36 ^c		19 0.83		0.0 0.00	177 2.90		18 0.51			0.0	0.0		20	168	23	6						
4/11 1540	150	67	9.1	98	192	7.9 8.2	1.64 ^c		8.3 0.36		0.0 0.00	95 1.56		7.8 0.22			0.0	0.0		18	82	4	35						
5/3 1625	100	77	8.3	99	223	8.1 8.3	27 1.35	6.4 0.53	2.7 0.42	1.0 0.03	2 0.07	107 1.75	12 0.25	10 0.28	0.1 0.00	0.1 0.01	0.0	14	134 ^f	18	94	4	1		PO ₄ 0.00 Tot., Alk., 110				
6/8 1000	60	74	8.3	97	216	7.9 8.4	1.78 ^c		10 0.44		3 0.10	103 1.69		9.5 0.27			0.0	0.0		20	89	0	2		Tot., Alk., 109				
7/3 1440	20	89	9.2	124	231	8.3 8.4	1.85 ^c		11 0.48		3 0.10	103 1.69		14 0.39			0.1	0.1		21	93	3	1		Tot., Alk., 110				
3/3 0830	1.5	74	7.7	90	289	7.5 7.9	2.40 ^c		13 0.57		0 0.00	148 2.43		14 0.39			0.0	0.0		19	120	0	2						
9/14 1000	DRY																												
10/2 1120	DRY																												
11/1 1530	50	70	9.8	109	327	7.9 8.0	2.54 ^c		17 0.74		0 0.00	137 2.25		28 0.79			0.3	0.3		23	127	15	2						
12/7 1100	75	49	11.5	100	248	7.7 8.3	2.01 ^c		12 0.52		2 0.07	114 1.87		16 0.45			0.1	0.1		21	100	2	7		Tot., Alk., 112				

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 8-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

COW CREEK NEAR MILLVILLE (STA. 88a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25° C)	pH a/b	Mineral constituents in parts per million								Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by i																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)			Nitrate (NO ₃)	Fluoride (F)				Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
1 11 1470	146	45	11.6	45	154	7.3 7.5	1.32 ^c	7.6 0.33		0 0.00	70 1.15			8.5 0.24				0.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						</

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown

e Derived from conductivity vs TDS curves

f Determined by determination of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
DELTA CROSS CHANNEL NEAR WALNUT GROVE (STA. 98)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sand- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ			
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents
1962	Tidal																								
1/10 0920		46	10.8	90	220	7.5 7.5	1.54 ^c	15 0.65		0 0.00	90 1.48		12 0.34			0.1			139 ^e	30	77	3	30	Median 620. Maximum 7000. Minimum 2-3	USGS
2/13 1020		49	10.9	95	85	7.1 7.4	0.64 ^c	4.2 0.18		0 0.00	31 0.51		3.5 0.10			0.1			54 ^e	22	32	7	140		
3/7 1540		49	10.9	95	146	7.1 7.5	1.09 ^c	7.4 0.32		0 0.00	52 0.85		15 0.42			0.0			92 ^e	23	54	11	25		
4/5 0935		57	9.8	94	147	7.1 7.6	1.06 ^c	7.4 0.32		0 0.00	57 0.93		5.2 0.15			0.1			93 ^e	23	53	6	26		
5/9 1015		63	8.7	90	120	7.1 7.7	1.1 0.55	8.2 0.36	1.0 0.03	0 0.00	52 0.85	10 0.21	7.0 0.20	0.4 0.01	0.1 0.01	0.0	15	ABS 0.0; PO ₄ 0.15	82 ^f	29	43	0	25		
6/11 1055		69	8.4	93	167	7.0 7.4	1.08 ^c	11 0.48		0 0.00	59 0.97	19 0.40	8.0 0.23			0.1			106 ^e	31	54	6	30		
7/11 0955		70	7.5	84	180	6.9 7.6	1.20 ^c	13 0.57		0 0.00	70 1.15		9.2 0.26			0.0			114 ^e	32	60	3	15		
8/6 1335		71	8.3	94	169	7.4 7.6	1.17 ^c	14 0.61		0 0.00	78 1.28		9.3 0.26			0.0			107 ^e	34	58	0	7		
9/4 1015		69	6.6	73	208	7.1 7.6	1.4 0.70	8.6 0.71	1.3 0.03	0 0.00	102 1.67	7.0 0.15	11 0.31	0.6 0.01	0.0 0.00	0.1	20	As 0.00; ABS 0.0; PO ₄ 0.00	130 ^f 112 ^g	34	71	0	30		
10/3 1225		67	6.8	74	170	7.3 7.4	1.24 ^c	11 0.48		0 0.00	82 1.34		8.3 0.23			0.0			107 ^f	28	62	0	4		
11/8 1255		59	8.7	86	158	7.3 7.9	1.12 ^c	11 0.48		0 0.00	74 1.21		7.4 0.21			0.0			100 ^e	30	56	0	30		
12/5 1245		50	10.5	92	87	7.1 7.3	0.69 ^c	4.2 0.18		0 0.00	44 0.72		3.6 0.10			0.0			55 ^e	24	35	0	35		

^a Field pH^b Laboratory pH^c Sum of calcium and magnesium in cpm^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{VI}), reported here as 0.0 except as shown.
0.00^e Derived from conductivity vs TDS curves.^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE R-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

DELTA-MENDOTA CANAL NEAR MENDOTA (STA. NO. 92)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃	Turbidity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 3-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
DELTA-MENDOTA CANAL NEAR TRACY (STA. 93)

Date and time sampled P.S.T	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ
							equivalents per million												Other constituents				
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)				Boron (B)			
1962																							
1/11 0950	68 MD	46	88		1440	7.5 8.1	6.88 ^c	168 7.31		0 0.00	205 3.36		252 7.11			0.7			344	176	2	Median 50.	
7/15 1405	0	54	77		1320	7.6 7.7	5.62 ^c	175 7.61		0 0.00	188 3.08		214 6.04			1.0			281	127	35	Maximum 2400.	
3/8 1440	0	61	96		665	7.4 7.7	2.91 ^c	78 3.39		0 0.00	103 1.69		95 2.68			0.5			145	61	25	Minimum 0.62	
4/11 1335	2550	68	89		538	7.4 7.5	2.56 ^c	56 2.44		0 0.00	88 1.44		76 2.14			0.0			128	56	38		
5/8 1400	3300	70	84		293	7.3 7.7	1.7 0.85	26 1.13	2.3 0.06	0 0.00	70 1.15	31 0.65	37 1.04	0.8 0.01	0.2 0.01	0.0	1.3	ABS 0.0; PO ₄ 0.00	79	22	30		
6/6 1400	3300	70	103		309	8.6 7.1	1.47 ^c	33 1.44		0 0.00	66 1.08		45 1.27			0.1			74	20	20		
7/10 1120	4150	75	77		269	7.3	1.48 ^c	27 1.17		0 0.00	73 1.20		31 0.87			0.0			74	14	45		
8/8 1125	3300	75	85		315	7.5 7.5	1.60 ^c	36 1.37		0 0.00	84 1.38		43 1.21			0.0			80	11	45		
9/6 1500	2510	75	90		368	7.4 7.6	1.8 0.90	45 1.96	2.1 0.05	0 0.00	92 1.51	25 0.52	53 1.50	0.9 0.01	0.0 0.00	0.2	1.5	As 0.00; ABS 0.1; PO ₄ 0.05	84	9	40		
10/4 1150	1700	68	100		662	7.6 7.7	3.01 ^c	78 3.39		0 0.00	140 2.29		111 3.13			0.1			150	35	10		
11/14 1145	860	61	93		810	7.6 7.7	3.76 ^c	102 4.44		0 0.00	148 2.43		140 3.95			0.2			188	67	30		
12/11 1100	0	51	67		729	7.4 7.8	2.96 ^c	83 3.61		0 0.00	127 2.08		120 3.39			0.5			148	44	15		
																						USGS	

^a Field pH^b Laboratory pH^c Sum of calcium and magnesium in epm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{VI}), reported here as 0.0 except as shown 0.00^e Derived from conductivity vs TDS curves^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
DELTA-MENDOTA CANAL BELOW TRACY PUMPING PLANT (STA. 93)

Date and time sampled P.S.T.	Discharge in cfs M. D.	Temp in °F	Dissolved oxygen ppm %Sat	Specific conductance (microhm/cm at 25°C)	pH ^b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sediment	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ				
						equivalents per million																			
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents	
1962																									
1/27-31	340			1310	7.5	62 3.09	33 2.70	163 7.09	5.1 0.13	0 0.00	203 3.33	141 2.94	232 6.54	3.5 0.06	0.2 0.01	0.8	28	Fe 0.00	769 ^f 7998	54	290	124			USGS
2/1-9	516			1360	7.6	63 3.14	34 2.79	167 7.26	5.2 0.13	0 0.00	199 3.26	159 3.31	221 6.23	3.5 0.06	0.2 0.01	0.8	26	Fe 0.00	778 ^f 8298	55	296	133			
2/20-28	110			617	7.4	30 1.50	15 1.20	71 3.09	3.1 0.08	0 0.00	100 1.64	71 1.48	104 2.93	2.8 0.05	0.0 0.00	0.6	18	Fe 0.19	365 ^f 3828	53	135	53			
3/1-6	142			582	7.5	28 1.40	15 1.20	66 2.87	2.6 0.07	0 0.00	101 1.66	73 1.52	79 2.23	2.5 0.04	0.2 0.01	0.4	19	Fe 0.09	336 ^f 3558	52	130	47			
3/7	760			325	7.3	18 0.90	8.8 0.72	34 1.48	2.1 0.05	0 0.00	71 1.16	36 0.75	38 1.07	2.1 0.03		0.3	17	Fe 0.22	192 ^f	47	81	23			
3/8	322			580	7.4	29 1.45	14 1.19	66 2.87	2.5 0.06	0 0.00	100 1.64	70 1.46	78 2.20	2.4 0.04		0.4	22	Fe 0.10	333 ^f	52	132	50			
3/9-16	614			393	7.4	21 1.05	10 0.83	42 1.83	2.1 0.05	0 0.00	78 1.28	47 0.98	50 1.41	1.8 0.03	0.2 0.01	0.2	19	Fe 0.09	231 ^f 2408	49	94	30			
3/17-31	1311			508	7.7	26 1.30	13 1.08	55 2.39	2.2 0.06	0 0.00	86 1.41	61 1.27	69 1.95	1.5 0.02	0.2 0.01	0.3	18	Fe 0.03	288 ^f 3068	49	119	48			
4/1-10	2380			640	7.9	32 1.60	16 1.35	73 3.18	2.7 0.07	0 0.00	103 1.69	75 1.56	95 2.68	3.0 0.05	0.2 0.01	0.4	17	Fe 0.03	365 ^f 3768	51	147	63			
4/11-20	2740			525	7.8	28 1.40	14 1.15	58 2.52	2.5 0.06	0 0.00	90 1.48	62 1.29	75 2.12	3.2 0.05	0.2 0.01	0.3	16	Fe 0.04	303 ^f 3128	49	127	53			
4/21-30	2930			396	7.5	23 1.15	11 0.89	42 1.83	2.2 0.06	0 0.00	77 1.26	43 0.90	55 1.55	3.9 0.06	0.1 0.01	0.2	15	Fe 0.07	233 ^f 2348	46	102	39			
5/1-12	3190			311	7.7	20 1.00	7.5 0.62	32 1.39	1.9 0.05	0 0.00	68 1.11	30 0.62	42 1.18	2.4 0.04	0.3 0.02	0.1	15	Fe 0.06	184 ^f 1748	45	81	25			
5/13-14	3010			194	7.7	14 0.70	3.9 0.32	18 0.78	1.4 0.04	0 0.00	47 0.77	16 0.33	26 0.73	2.8 0.05		0.1	15		120 ^f 1118	42	51	12			
5/15-31	2630			340	7.5	22 1.10	7.5 0.62	36 1.57	2.1 0.05	0 0.00	73 1.20	31 0.65	48 1.35	2.5 0.04	0.3 0.02	0.1	18	Fe 0.09	204 ^f 1938	47	86	26			
6/1-4	2920			353	7.7	21 1.05	9.4 0.77	36 1.57	2.6 0.07	0 0.00	83 1.36	31 0.65	48 1.35	1.9 0.03	0.2 0.01	0.1	1.5	Fe 0.04	206 ^f 2148	45	91	23			

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE E-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
DELTA-MENDOTA CANAL BELOW TRACY PUMPING PLANT (STA. 93)
(continued)

Date and time sampled P.S.T.	Discharge in cfs M. D.	Dissolved oxygen ppm	Specific conductance (micro-mhos at 25°C)	pH ^b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium as CaCO ₃ Total N.C. ppm	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by ⁱ
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)						
1962																				
6/5-11	3530		244	7.5	15 0.75	6.0 0.19	25 1.09	1.9 0.05	0 0.00	62 1.02	18 0.37	32 0.90	1.2 0.02	0.2 0.01	0.1	16	Fe 0.01	46	USGS	
6/12-21	3860		270	7.7	17 0.85	6.7 0.55	28 1.22	2.1 0.05	0 0.00	72 1.18	22 0.46	34 0.96	0.8 0.01	0.3 0.02	0.2	15	Fe 0.04	46		
6/22-23	3930		440	7.9	25 1.25	10 0.83	48 2.09	2.6 0.07	0 0.00	88 1.44	37 0.77	68 1.92	0.0 0.00	0.3 0.02	0.2	15	Fe 0.06	49		
6/24-30	3890		286	7.7	17 0.55	8.1 0.67	29 1.26	2.1 0.05	0 0.00	77 1.26	23 0.48	35 0.99	0.8 0.01	0.2 0.01	0.1	18	Fe 0.13	45		
7/1-10	3820		259	7.5	15 0.75	8.1 0.67	26 1.13	1.3 0.03	0 0.00	75 1.23	20 0.42	30 0.85	1.8 0.03	0.1 0.01	0.0	18	Fe 0.03	44		
7/11-20	4240		237	7.5	16 0.80	7.1 0.58	21 0.91	1.2 0.03	0 0.00	77 1.26	19 0.40	24 0.68	1.4 0.02	0.1 0.01	0.0	15	Fe 0.01	39		
7/21-31	4160		246	7.6	15 0.75	7.7 0.63	25 1.09	1.3 0.03	0 0.00	79 1.29	20 0.42	26 0.73	1.4 0.02	0.1 0.01	0.0	14	Fe 0.03	44		
8/1-5	3970		300	7.3	16 0.80	8.8 0.72	33 1.44	1.4 0.04	0 0.00	81 1.33	22 0.46	41 1.16	2.1 0.03	0.0 0.00	0.0	17	Fe 0.06	48		
8/6	3890		1330	7.2	65 3.24	33 2.68	172 7.18	3.6 0.09	0 0.00	218 3.57	150 3.12	224 6.32	1.8 0.03		0.7	26		55		
8/7-9	3750		307	7.4	16 0.80	8.5 0.70	35 1.52	1.8 0.05	0 0.00	83 1.36	19 0.40	42 1.18	1.3 0.02	0.1 0.01	0.0	17	Fe 0.09	50		
8/10	3580		437	7.0	25 1.25	11 0.91	48 2.09	2.4 0.03	0 0.00	101 1.66	30 0.82	69 1.95	1.7 0.03		0.0	18		48		
8/11	3410		290	7.2	16 0.80	8.5 0.70	32 1.39	1.7 0.04	0 0.00	82 1.34	18 0.37	39 1.10	1.9 0.03		0.0	17		47		
8/12	3410		924	7.9	50 2.50	24 1.96	106 4.61	4.2 0.11	0 0.00	178 2.92	55 1.15	170 4.86	2.7 0.04		0.1	37		50		
8/13	3300		302	7.3	16 0.80	8.5 0.70	34 1.48	1.8 0.05	0 0.00	84 1.38	18 0.37	42 1.18	1.3 0.02		0.0	17		49		
8/14	3300		633	7.2	34 1.70	16 1.32	71 3.09	2.8 0.07	0 0.00	128 2.10	46 0.96	107 3.02	1.6 0.03		0.0	22		50		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in gpm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD), Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 3-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
DELTA-MENDOTA CANAL BELOW TRACY PUMPING PLANT (STA. 93)
(continued)

Date and time sampled P.S.T.	Discharge in cfs M. D.	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (microhmhos at 25°C)	pH ^b	Mineral constituents in										parts per million					Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
							Calcium (Ca)										Other constituents											Silica (SiO ₂)	Boron (B)	Fluo- ride (F)	Ni- trate (NO ₃)	Chlo- ride (Cl)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
							Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chloride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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o Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
DELTA-MENDOTA CANAL BELOW TRACY PUMPING PLANT (STA. 93)
(continued)

Date and time sampled P.S.T.	Discharge in cfs M. D.	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (microhm-cm at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium in ppm	Hardness as CaCO ₃ in ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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^a Field pH^b Laboratory pH^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBOPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

DUTCH SLOUGH AT FARRAR PARK BRIDGE (STA. 108b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBOPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

ELDER CREEK AT GERBER (STA. 95a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by i	
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
1/12 1150	4.3	48	11.7	101	534	7.7 8.2	4.46 ^c		26 1.13		0 0.00	208 3.41		60 1.69			0.1			20	223	52	2	USGS
2/9 1305	1,370	53	10.2	94	177	8.1 7.6	1.73 ^c		7.0 0.30		0 0.00	23 1.52		4.4 0.12			0.1			15	87	11	500	
3/9 0905	255	48	11.0	95	318	8.1 8.3	3.02 ^c		6.5 0.28		3 0.10	166 2.72		8.0 0.23		Tot. Alk. 172	0.1			8	151	15	45	
4/6 0915	160	60	10.0	100	208	8.1 8.2	1.91 ^c		6.6 0.29		0 0.00	111 1.82		6.8 0.19			0.0			13	96	5	20	
5/7 1240	34	79	8.3	101	314	8.3 8.4	26 1.30	18 1.52	1.2 0.03	4 0.13	156 2.56	11 0.23	18 0.51	0.1 0.00	0.1 0.01	Tot. Alk. 164 PO ₄ 0.10	0.3	22	18	141	7	3		
6/20 0730	2.4	72	8.0	91	459	8.1 8.2	4.12 ^c		18 0.78		0 0.00	235 3.85		32 0.90			0.1		16	206	13	10		
7/2 0945	0.8	77	10.7	127	475	8.1 8.3	4.28 ^c		20 0.87		6 0.20	229 3.75		31 0.87		Tot. Alk. 241	0.0		17	214	16	2		
8/1 1100	DRY																							
9/11 0915	DRY																							
10/1 0815	DRY																							
11/1 1000	DRY																							
12/10 1010	23	50	11.5	102	400	8.1 8.4	3.43 ^c		18 0.78		3 0.10	186 3.05		31 0.87		Tot. Alk. 193	0.0		19	171	13	3		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in apm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

ELDER CREEK NEAR PASKENTIA (STA. 13e)

Date and time sampled P.S.T. 13e	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micronhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total N.C. ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by						
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trote (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents			
1/11 0925	12	36	13.0	94	550	7.9 8.3	4.23 ^c		36 1.57		4 0.13	201 3.29		63 1.76				0.0					27	212	41	0.9		USGS
2/14 1220	368	49	11.1	97	255	7.9 8.1	2.14 ^c		7.9 0.34		0 0.00	144 2.36		5.3 0.15				0.0					12	122	4	1500		
3/4 1450	92	52	10.5	95	389	8.1 8.4	3.92 ^c		12 0.52		6 0.20	202 3.31		13 0.37				0.0					12	196	21	4		
4/12 0930	127	52	10.5	95	185	7.9 8.2	1.05 ^c		6.7 0.29		0 0.00	100 1.64		9.8 0.28				0.3					15	82	0	30		
5/17 1045	34	64	9.3	97	334	8.4 8.7	1.65	15 1.23	15 0.65	0.8 0.02	4 0.13	157 2.57	2.0 0.19	25 0.71	0.1 0.00	0.1 0.01		0.0	17	196 ^f	18	144	9	1				
6/19 1255	9.3	88	8.0	107	450	8.4 8.7	3.74 ^c		29 1.26		19 0.63	157 2.57		48 1.35				0.0					25	187	27	1		
7/18 1030	2	81	8.5	106	748	8.4 8.7	4.27 ^c		68 2.96		5 0.17	153 2.51		149 4.20				0.1					41	213	79	1		
8/21 1030	0.6	77	9.2	110	1,060	8.5 8.7	5.56 ^c		111 4.83		6 0.20	170 2.79		245 6.91				0.1					46	278	129	2		
9/20 1125	0.5	68	10.2	111	1,580	8.5 8.7	65 3.24	48 3.96	184 8.00	2.3 0.06	16 0.53	130 2.13	11 0.23	440 12.11	0.3 0.00	0.1 0.01		40		871 ^f 1,010 ^g	52	360	227	4				
10/18 1240	25	58	10.0	97	454	8.1 8.3	3.56 ^c		25 1.09		6 0.20	180 2.95		46 1.30				0.1					23	179	22	7		
11/28 1210	43	46	11.6	97	368	8.1 8.1	3.06 ^c		18 0.76		0 0.00	172 2.82		29 0.82				0.0					20	153	12	25		
12/19 1300	81	49	11.3	98	335	7.5 8.4	3.02 ^c		14 0.61		4 0.13	167 2.74		16 0.45				0.0					17	151	7	35		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Control District (SBCFCD), Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO.5)

FALSE RIVER AT WEBB PUMP (STA. 112a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliformly MPN/ml	Analyzed by
			ppm	% Sat		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)				
1962	Tidal																				USER
2/16 1130		50			604																
3/12 1040		51			467																
4/23 1035		64			161																
5/16 1035		63			152																
6/19 1130		74			198																
7/17 1035					249																
8/14 0935		72			328																
9/14 0930		68			468																
10/17 0935		62			231																

o Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
FEATHER RIVER AT NICOLAUS (STA. 20)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen	%Sat	Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ		
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	
1962																									
1/4 1100	2160	42	13.4	106	131	7.3 7.9	1.12 ^c	4.5 0.20		0 0.00	69 1.13		2.0 0.06			0.0					56	0	3	Median 230. Maximum 7000. Minimum 6.2	USGS
2/8 1415	4920	51	11.2	100	130	7.5 8.0	1.10 ^c	4.8 0.21		0 0.00	62 1.02		4.9 0.14			0.0					55	4	30		
3/15 0800	9500 est.	38	11.1	83	98	7.3 7.7	0.82 ^c	3.4 0.15		0 0.00	44 0.72		2.4 0.07			0.1					41	5	35		
4/5 0850	14600	54	10.4	96	88	7.3 7.2	0.76 ^c	4.3 0.19		0 0.00	43 0.70		2.8 0.08			0.0					38	3	35		
5/15 0830	8700	57	10.6	102	71	7.2 7.5	0.36	2.7 0.22	2.5 0.11	0.6 0.02	0 0.00	36 0.59	2.0 0.04	2.0 0.06	0.0 0.00	0.0		15 ABS 0.0; PO ₄ 0.00;		29	0	6			
6/11 0800	5510	66	8.9	95	68	7.2 7.3	0.52 ^c	3.5 0.15		0 0.00	33 0.54		2.8 0.08			0.0					26	0	10		
7/2 0830	1400	73	8.3	96	106	7.7 7.7	0.88 ^c	4.6 0.20		0 0.00	57 0.93		3.0 0.08			0.1					44	0	7		
8/13 1100	1380	80	8.5	105	115	7.4 7.5	1.08 ^c	6.0 0.26		0 0.00	68 1.11		2.5 0.07			0.1					54	0	4		
9/10 0725	828	62	8.9	91	134	7.5 7.7	0.70	5.2 0.13	5.6 0.24	1.1 0.03	0 0.00	78 1.28	3.0 0.06	2.4 0.07	0.2 0.00	0.1 0.01	0.1	13 As 0.00; ABS 0.0; PO ₄ 0.05		56	0	15			
10/1 1450	1350	73	9.5	110	123	7.5 7.5	1.10 ^c	5.6 0.24		0 0.00	73 1.20		2.2 0.06			0.0					55	0	4		
11/1 0950	6180	60	9.0	90	113	6.7 7.3	0.94 ^c	4.4 0.19		0 0.00	62 1.02		3.6 0.10			0.0					47	0	8		
12/3 1035	8380	50	11.0	97	105	7.3 7.4	0.88 ^c	4.1 0.18		0 0.00	56 0.92		3.0 0.08			0.1					44	0	5		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
FEATHER RIVER AT NICOLAUS (STA. 20)

Date and time sampled P.S.T.	Discharge in cfs Avg. MD	Temp in °F	Dissolved oxygen ppm %Sat	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by	
						equivalents per million																
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)
1962																						
1/1-19	2060			132	7.9	13 0.65	5.2 0.43	6.4 0.28		0 0.00	68 1.11							868	21	54	0	USGS
1/20-31	3610			125	7.1	12 0.60	4.9 0.40	5.8 0.25		0 0.00	54 0.89							908	20	50	6	
2/1-8	3220			129	7.2	12 0.60	5.7 0.47	7.2 0.31		0 0.00	63 1.03							868	22	53	1	
2/9-18	34500			80	7.1	8.0 0.40	2.6 0.21	3.3 0.14		0 0.00	31 0.51							668	19	30	5	
2/19-28	18600			98	7.2	9.5 0.47	3.8 0.31	4.4 0.19		0 0.00	41 0.67							738	20	39	5	
3/1-10	14300			102	7.1	10 0.50	2.9 0.24	6.8 0.30		0 0.00	43 0.70							688	29	37	2	
3/11-20	9540			104	7.3	9.6 0.48	4.1 0.34	5.4 0.23		0 0.00	47 0.77							688	22	41	2	
3/21-31	10200			104	7.5	10 0.50	4.1 0.34	4.8 0.21		0 0.00	52 0.85							748	20	42	0	
4/1-10	15500			92	7.5	9.2 0.46	3.2 0.26	4.5 0.20		0 0.00	44 0.72							668	22	36	0	
4/11-20	18100			75	7.4	8.8 0.44	1.9 0.16	3.6 0.16		0 0.00	36 0.59							548	21	30	0	
4/21-30	13200			75	7.4	8.4 0.42	2.2 0.18	3.7 0.16		0 0.00	37 0.61							558	21	30	0	
5/1-15	10400			72	7.2	7.3 0.36	2.4 0.20	3.3 0.14		0 0.00	35 0.57							548	20	28	0	
5/16-31	6530			79	7.8	8.0 0.40	2.7 0.22	4.0 0.17		0 0.00	40 0.66							628	22	31	0	
6/1-15	---			77	7.0	7.6 0.38	2.8 0.23	4.0 0.17		0 0.00	38 0.62		2.6 0.07		0.0			538	22	30	0	
6/16-30	---			91	7.1	9.9 0.49	2.7 0.22	4.6 0.20		0 0.00	46 0.75		4.0 0.11		0.0			628	22	35	0	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

FEATHER RIVER AT NICOLAUS (STA. 20)

(continued)

Date and time sampled P.S.T.	Discharge in cfs in of Avg. MD	Temp in of	Dissolved oxygen ppm	Specific conductance (microhmhos at 25°C)	pH ^b	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent acid-soluble in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by i
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)	Other constituents			
1962																					
7/1-7	1210			118	7.5	11 0.55	4.7 0.39	5.3 0.23		0 0.00	61 1.00		3.5 0.10			0.0					USGS
7/8-31	706			129	7.8	12 0.60	6.1 0.50	5.6 0.24		0 0.00	70 1.15		3.0 0.08			0.1					
8/1-15	926			129	7.4	13 0.65	6.0 0.49	6.0 0.26	1.2 0.03	0 0.00	73 1.20	3.0 0.06	4.5 0.13	1.7 0.03	0.2 0.01	0.1	17	Fe 0.00			
8/16-31	833			139	7.1	16 0.80	5.1 0.42	6.6 0.29	1.4 0.04	0 0.00	78 1.28	5.0 0.10	4.0 0.11	1.7 0.03	0.2 0.01	0.1	17	Fe 0.01			
9/1-18	1190			136	7.5	12 0.60	6.3 0.52	6.2 0.27	1.3 0.03	0 0.00	75 1.23	4.0 0.08	3.0 0.08	1.3 0.02	0.1 0.01	0.0	15	Fe 0.00			
9/18	Discontinued																				

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁺⁶), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
FEATHER RIVER NEAR OROVILLE (STA. 19)

Date and time sampled P.S.T	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent solid - TSS ^h in ppm	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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^a Field pH^b Laboratory pH.^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBFCFD), Metropolitan Water District of Southern California (MWD), Los Angeles Department of Water and Power (LADWP), City of Los Angeles, Department of Public Health (LADPH), City of Long Beach, Department of Public Health (LBPH), Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
FEATHER RIVER BELOW SHANGHAI BEND (STA. 20a)

Date and time sampled P.S.T	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ			
			ppm	%Sat			parts per million																		
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents
1962																									
1/5 1510	2160	44	12.5	102	120	7.3 7.6	1.08 ^c	4.0 0.17		0 0.00	66 1.08		1.9 0.05			0.0			79 ^e	14	54	0	4	Median 230.	USGS
2/8 1200	4680	47	11.7	100	126	7.4 8.1	1.10 ^c	4.9 0.21		0 0.00	68 1.11		3.4 0.10			0.0			83 ^e	16	55	0	50	Maximum 7000. Minimum 23.	
3/15 0830	7820	46	11.7	98	100	7.4 7.9	0.86 ^c	3.7 0.16		0 0.00	52 0.85		1.1 0.03			0.0			66 ^e	16	43	0	25		
4/5 0945	14500	53	10.9	100	84	7.4 7.7	0.78 ^c	4.2 0.18		0 0.00	44 0.72		2.0 0.06			0.0			55 ^e	19	39	3	40		
5/15 0900	8220	56	10.9	104	68	7.2 7.7	8.4 0.42	1.7 0.14	0.5 0.01	0 0.00	35 0.57	1.0 0.02	2.0 0.06	0.2 0.00	0.1 0.01	0.0	1.4	PO ₄ 0.00	48 ^f	17	28	0	20		
6/11 0900	5500	63	9.4	97	66	7.3 7.4	0.56 ^c	2.3 0.10		0 0.00	33 0.54		2.2 0.06			0.0			44 ^e	15	28	1	15		
7/12 0910	1620 est	74	7.8	91	105	7.3 7.5	0.87 ^c	5.4 0.23		0 0.00	55 0.90		2.0 0.06		0.1	0.1			69 ^e	21	44	0	10		
8/13 1130	988	79	8.2	101	121	7.4 7.6	1.22 ^c	5.4 0.23		0 0.00	72 1.18		2.2 0.06		0.1	0.1			80 ^e	16	61	2	4		
9/10 0950	1080	71	8.6	97	137	7.5 7.5	1.3 0.65	6.0 0.49	1.1 0.03	0 0.00	76 1.25	5.0 0.10	2.5 0.07	1.3 0.02	0.6 0.03	0.2	1.3	PO ₄ 0.00	86 ^f 88 ^g	18	57	0	25		
10/1 1400	1600	71	9.1	103	123	7.3 7.6	1.06 ^c	5.2 0.23		0 0.00	72 1.18		1.8 0.05			0.0			81 ^e	18	53	0	15		
11/1 1030	5990	58	9.8	96	109	7.1 7.5	0.91 ^c	4.8 0.21		0 0.00	63 1.03		2.8 0.08			0.0			72 ^e	19	46	0	10		
12/3 1120	19000est	50	11.1	98	93	7.3 7.3	0.79 ^c	3.9 0.17		0 0.00	50 0.82		2.6 0.07			0.0			61 ^e	18	39	0	30		

a Field pH

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
FRESNO RIVER NEAR DAULTON (STA. NO. 113)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm % Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million equivalents										Total dissolved solids in ppm	Percent sediment in ppm	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by 1			
						Mineral constituents in parts per million equivalents																		
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents
1962	12	43	12.6	101	257	7.8	^c 1.12		28 1.22		0.0 0.00	57 0.93		46 1.30				52	56	9	5	Median 6.2 Maximum 230. Minimum 0.21	USGS	
1/8 1035																								
2/5 1130	28	48	11.5	99	209	7.7	^c 0.99		21 0.91		0.0 0.00	60 0.98		31 0.87				48	50	1	10			
3/5 1445	181	52	10.2	93	151	7.6	^c 0.98		12 0.52		0.0 0.00	57 0.93		12 0.34				37	44	0	15			
4/9 1050	165	64	9.1	64	108	7.6	^c 0.72		10 0.44		0.0 0.00	49 0.80		11 0.31				38	36	0	10			
5/7 1050	100	66	9.4	100	79	7.5	6.8 0.34	1.2 0.10	7.5 0.33	1.1 0.03	0.0 0.00	32 0.52	1.0 0.02	7.2 0.20	0.2 0.00	0.2 0.01	0.0	59	22	0	9			
6/7 1225	84	73	8.5	98	57	7.4	^c 0.30		5.0 0.22		0.0 0.00	21 0.34		7.2 0.20		0.1		42	15	0	5			
7/12 1015	0.0	78	7.8	94	93	7.5	^c 0.50		9.6 0.42		0.0 0.00	30 0.49		15 0.42				46	25	0	55			
8/6 0930	0	78	8.6	104	169	7.6	^c 0.82		19 0.83		0.0 0.00	43 0.70		28 0.79				50	41	6	2			
9/	No sample collected.																							
10/	No sample collected.																							
11/8 1250	6	68	4.1	100	262	7.8	^c 1.04		30 1.30		0.0 0.00	58 0.95		49 1.38				56	52	4	2			
12/6 1200	1	51	11.0	98	227	7.7	^c 1.02		25 1.09		0.0 0.00	56 0.92		39 1.10				52	51	5	3			

a Field pH

b Laboratory pH.

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
GRANT LINE CANAL AT TRACY ROAD BRIDGE (STA. 103a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micro mhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sol- idum in ppm	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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^a Field pH^b Laboratory pH^c Sum of calcium and magnesium in ppm^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
INDIAN CREEK NEAR CRESCENT MILLS (STA. 17d)

Date and time sampled P.S.T.	Discharges in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as $\frac{0.0}{0.00}$ except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DMR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
INDIAN SLOUGH NEAR BRENTWOOD (STA. 107)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent lead in ppm	Hardness as CaCO ₃ ppm	Turbidity in mppm	Coliform MPN/ml	Analyzed by ⁱ			
			ppm	%Sat			equivalents per million																		
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents
1962	Tidal																								
1/11		48	12.3	106	1350	7.7	7.20 ^c		157		5	330		184			2.3			752 ^e	49	360	81	25	Median 50.
1/15						8.3		6.83		0.17	5.41		5.19												Maximum 7000.
2/15		54	6.3	58	1200	7.3	5.52 ^c		150		0	177		190			1.5			668 ^e	54	276	131	40	Minimum 1.3
1/50						7.4		6.52		0.00	2.90		5.36												
3/8		60	9.2	92	1350	7.6	7.82 ^c		149		0	355		175			2.4			752 ^e	45	391	100	10	
12/35						8.2		6.48		0.00	5.82		494												
4/11		66	8.1	87	818	7.6	3.68 ^c		93		0	138		132			1.1			456 ^e	54	184	71	45	
1/50						7.9		4.26		0.00	2.26		3.72												
5/8		72	6.8	78	246	7.2	16	7.3	21	2.0	0	68	22	27	0.7	0.3	0.5	15	PO ₄	0.00	39	70	14	25	
12/50						7.7	0.80	0.60	0.91	0.05	0.00	1.11	0.46	0.76	0.01	0.02				144 ^f	49	99	19	85	
6/6		74	7.1	83	416	8.4	1.93 ^c		44		0	98		54			0.5			232 ^e	49	99	19	30	
12/30						7.4		1.91		0.00	1.61		1.52							132 ^e	42	65	3	30	
7/10		78	5.6	68	237	7.3	1.30 ^c		22		0	75		24			0.1			215 ^e	55	87	12	30	
1300						7.7		0.96		0.00	1.23		0.78							249 ^f	55	95	13	50	
8/6		77	7.1	81	381	7.3	1.73 ^c		48		0	94		58			0.1			249 ^f	55	95	13	50	
1105						7.7		2.09		0.00	1.51		1.64							250 ^g	55	118	23	25	
9/6		74	6.5	76	438	7.3	18	7.6	54	2.3	0	100	27	70	1.3	0.2	0.2	15	PO ₄	0.15	55	95	13	50	
10/5						7.6	0.90	1.00	2.35	0.00	0.00	1.74	0.50	1.97	0.02	0.01				300 ^e	55	118	23	25	
10/4		67	6.5	70	539	7.3	2.36 ^c		66		0	116		86			0.5			668 ^e	47	328	77	6	
1005						7.6		2.87		0.00	1.90		2.43												
11/13		60	9.5	95	1200	8.1	6.56 ^c		134		0	306		157			2.0								
12/45						8.0		5.83		0.00	5.02		4.43												
12/10		53	10.8	99	1350	8.1	6.18 ^c		170		0	337		180			2.2			752 ^e	54	309	33	7	
1220						8.1		7.40		0.00	5.52		5.08												

a Field pH.

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as $\frac{0.0}{0.00}$ except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
ITALIAN SLOUGH NEAR MOUTH (STA. 106)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (mhos/cm at 25°C)	pH ^a	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by ⁱ
							equivalents															
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)						
1962	Tidal																					
1/11 1050		40	7.9	61	1220	7.4 7.9	5.76 ^c	144 6.26		0 0.00	176 2.88		212 5.98			0.5		15	Median 210.	USGS		
2/15 1250		52	8.1	73	1610	7.1 7.1	6.96 ^c	198 8.61		0 0.00	149 2.44		326 9.20			1.9	40	Maximum 2400				
3/8 1330		54	8.6	80	898	7.4 7.6	3.16 ^c	113 4.92		0 0.00	106 1.74		150 4.46			1.0	30	Minimum 6.2				
4/11 1310		68	10.2	112	592	7.6 7.6	2.50 ^c	63 2.74		0 0.00	88 1.44		88 2.48			0.4	15					
5/8 1330		70	7.0	78	304	7.1 7.6	1.7 0.85	8.9 0.73	2.2 0.06	0 0.00	68 1.11	30 0.62	39 1.10	1.0 0.02	0.1		25					
6/6 1330		72	6.7	77	415	8.4 7.8	1.98 ^c	42 1.83		0 0.00	94 1.54		64 1.81			0.1	30					
7/10 1215		78	6.6	80	231	7.3 7.5	1.32 ^c	20 0.87		0 0.00	71 1.16		24 0.68			0.0	45					
8/7 1130		74	7.9	92	293	7.5 7.7	1.46 ^c	34 1.48		0 0.00	80 1.31		40 1.13			0.0	25					
9/6 1400		75	7.7	91	346	7.4 7.7	1.6 0.80	9.7 0.80	1.6 0.04	0 0.00	86 1.41	22 0.46	51 1.44	1.3 0.02	0.2 0.01	0.0	25					
10/4 1045		68	7.8	86	394	7.4 7.6	1.82 ^c	46 2.00		0 0.00	93 1.52		61 1.72			0.1	10					
11/13 1355		62	7.9	81	869	7.4 8.0	3.76 ^c	101 4.39		0 0.00	124 2.03		154 4.34			0.5	10					
12/10 1255		51	6.6	59	729	7.3 7.6	3.00 ^c	82 3.57		0 0.00	113 1.85		125 3.53			0.5	10					

^a Field pH

^b Laboratory pH

^c Sum of calcium and magnesium in ppm

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents.

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE E-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

KAWeah RIVER BELOW THE INUS DAM (STA. NO. 35)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent soli- dum	Hardness as CaCO ₃ Total in ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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1/9 1500	---	48	12.2	106	130	7.8	c 1.04		6.6 0.29		0.0 0.00	65 1.07		6.0 0.17			0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
KERN RIVER NEAR BAKERSFIELD (STA. NO. 36)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in								parts per million					Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform ^b MPN/ml	Analyzed by ¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁺⁶), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

KERN RIVER BELOW ISABELLA DAM (STA. NO. 36a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent calcium	Hardness as CaCO ₃ in ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by	
						equivalents																
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)
1962																					USGS	
1/2 1350	19	47	10.6	91	401	7.8	^c 2.54	38 1.05		0.0 0.00	192 5.15		1.4 0.51			0.4		39	127	0	3	Median 22, Maximum 7000, Minimum 0.092
2/5 1100	26	44	10.0	82	411	8.1	^c 2.54	39 1.70		0.0 0.00	144 3.18		1.8 0.51			0.4		40	127	0	7	
3/2 1100	---	47	10.5	89	280	7.5	^c 1.70	26 1.13		0.0 0.00	130 2.13		1.1 0.31			0.3		40	85	0	8	
4/2 1600	---	53	9.7	89	254	7.5	^c 1.56	24 1.01		0.0 0.00	116 1.90		1.3 0.37			0.2		40	78	0	20	
5/1 1100	773	57	9.2	89	113	7.8	11 0.55	10 0.74	1.6 0.04	0.0 0.00	49 0.80	9.0 0.19	3.9 0.11	0.0 0.00	0.2 0.01	0.2	13	74	33	0	36	
6/1 1030	---	59	9.3	92	96	6.8	^c 0.58	7.8 0.34		0.0 0.00	44 0.72		3.2 0.09			0.1		37	29	0	6	
7/2 0930	1380	63	8.8	91	66	7.1	^c 0.40	6.0 0.26		0.0 0.00	28 0.46		3.0 0.08			0.0		37	20	0	8	
8/1	---	67	8.5	92	72	6.8	^c 0.52	5.9 0.26		0.0 0.00	32 0.52		3.0 0.08			0.0		33	26	0	2	
9/4 0930	205	62	9.0	92	151	8.1	17 0.85	12 0.32	1.3 0.03	0.0 0.00	81 1.33	7.4 0.15	5.2 0.15	0.6 0.01	0.1 0.01	0.1	15	101	52	0	2	
10/1 0930	116	68	7.6	83	120	6.9	^c 0.61	11 0.78		0.0 0.00	50 0.82		8.5 0.24			0.3		43	32	0	15	
11/1 1100	---	62	8.4	86	113	7.1	^c 0.72	8.3 0.36		0.0 0.00	54 0.89		4.0 0.11			0.1		33	36	0	2	
12/3 1130	14	52	10.0	91	125	6.7	^c 0.78	9.6 0.42		0.0 0.00	62 1.02		3.2 0.09			0.2		35	39	0	2	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

KERN RIVER NEAR KERNVILLE (STA. NO. 36b)

Date and time sampled P.S.T.	Discharge Temp in °F	Specific conductance (micromhos at 25°C)		Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by
		Dissolved oxygen ppm	% Sal	Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicor- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)	Other constituents			
1962																			USGS
1/2 1300	151	11.4	91	1.08 ^c		18 0.78		0.0 0.00	83 1.36		7.0 0.25						42	54	Median 23. Maximum 7000. Minimum 2.3
2/5 1015	242	10.5	82	0.97 ^c		17 0.74		0.0 0.00	75 1.23		7.2 0.20						43	18	
3/2 1100	---	12.0	89	0.96 ^c		15 0.65		0.0 0.00	72 1.18		2.8 0.08						40	18	
4/2 0950	1048	10.3	86	0.76 ^c		10 0.44		0.0 0.00	52 0.85		7.0 0.20						39	34	
5/1 1330	1803	9.6	90	0.32 ^c	0.7 0.06	6.1 0.27	0.9 0.02	0.0 0.00	29 0.45	6.0 0.12	1.6 0.05	0.0 0.00	0.2 0.01	0.0 0.0	14	PO ₄ 0.05	40	19	
6/1 0945	---	9.6	91	0.32 ^c		4.0 0.17		0.0 0.00	23 0.38		1.9 0.05						35	16	
7/2 0845	1572	9.2	90	0.26 ^c		3.6 0.15		0.0 0.00	23 0.38		2.8 0.08						38	13	
8/1 0920	---	8.9	92	0.44 ^c		6.4 0.28		0.0 0.00	30 0.49		28 0.08						39	22	
9/4 1030	30	8.2	90	0.73 ^c	0.9 0.07	6.2 0.27	1.1 0.03	0.0 0.00	36 0.59	4.4 0.09	2.0 0.06	4.6 0.07	0.1 0.01	0.0 0.0	6.2	PO ₄ 0.50	34	25	
10/1 0900	---	9.2	91	0.80 ^c		13 0.57		0.0 0.00	58 0.95		8.0 0.23						42	40	
11/1 1030	---	9.6	88	0.78 ^c		15 0.65		0.0 0.00	66 1.08		6.2 0.17						45	39	
12/3 1030	---	11.1	87	0.94 ^c		17 0.74		0.0 0.00	77 1.26		7.0 0.20						44	47	

o Field pH

b Laboratory pH

c Sum of calcium and magnesium in apm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by oxidation of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP), City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

KINGS RIVER BELOW NORTH FORK (STA. NO. 33e)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (at 25°C)	pH ^b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ in ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ				
			ppm	% Sat			equivalents per million																			
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents	
1962																			USGS							
1/2 1130	246	42	11.5	92	55	7.0	^c 0.39	3.4 0.15				0.0 0.00	25 0.41		2.4 0.07			0.0			28	19	0	3	Median 9.6 Maximum 420 Minimum 0.23	
2/5 1130	413	47	11.4	96	52	7.2	^c 0.32	3.5 0.15				0.0 0.00	20 0.33		3.2 0.09			0.1			32	16	0	1		
3/5 1200	---	47	10.7	91	62	7.0	^c 0.42	3.6 0.16				0.0 0.00	26 0.43		2.2 0.06			0.0			28	21	0	13		
4/2 1210	1790	55	9.5	90	45	6.9	^c 0.28	3.5 0.15				0.0 0.00	20 0.33		2.0 0.06			0.1			35	14	0	6		
5/1 1010	4079	54	8.0	74	24	7.0	3.2 0.16	1.8 0.08	0.1 0.01		0.6 0.02	0.0 0.00	11 0.18	1.0 0.02	1.0 0.03	0.0 0.00	0.3 0.02	0.0	7.8	PO ₄ 0.05	21	8	0	5		
6/4 1130	6232	56	10.1	97	19	6.9	^c 0.13	1.2 0.05				0.0 0.00	8 0.13		0.4 0.01			0.0			28	6	0	2		
7/2 1100	4310	64	7.5	78	18	6.5	^c 0.11	1.2 0.05				0.0 0.00	8 0.13		2.0 0.06			0.1			31	6	0	8		
8/1 1145	---	63	9.7	100	25	6.8	^c 0.17	1.7 0.07				0.0 0.00	11 0.18		1.0 0.03			0.0			29	8	0	1		
9/3 0945	315	64	9.9	103	42	6.5	4.7 0.23	2.7 0.12	0.4 0.03		0.7 0.02	0.0 0.00	14 0.23	5.0 0.10	1.8 0.05	0.8 0.01	0.1 0.01	0.0	7.7	PO ₄ 0.00	31	13	2	1		
10/1 1115	272	66	10.5	111	49	6.9	^c 0.31	3.3 0.14				0.0 0.00	20 0.33		2.4 0.07			0.0			31	16	0	15		
11/5 1200	194	58	10.0	98	56	7.4	^c 0.36	3.6 0.16				0.0 0.00	24 0.39		2.5 0.07			0.0			31	18	0	1		
12/3 1100	---	46	10.2	86	62	6.9	^c 0.40	3.8 0.17				0.0 0.00	25 0.41		2.8 0.08			0.0			30	20	0	1		

^a Field pH.^b Laboratory pH.^c Sum of calcium and magnesium in epm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves.^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE R-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

KINGS RIVER BELOW PEOPLES WEIR (STA. NO. 34)

Date and time sampled P.S.T.	Discharge in cfs	Temp in op	Dissolved oxygen		Specific conductance (micro mhos at 25° C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent solids in ppm	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

KINGS RIVER BELOW PINE FLAT DAM (STA. NO. 33b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million								Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by ⁱ
			ppm	% Sat			equivalents													
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)						
1962																		11SGS		
1/2 1345	85	45	11.8	98	50	7.3	^c 0.36	2.8 0.12		0.0 0.00	25 0.41		1.0 0.03			0.0		Median 4.2 Maximum 2400 Minimum 0.23		
2/5 1345	111	50	10.6	94	60	7.0	^c 0.11	3.0 0.13		0.0 0.00	27 0.44		1.8 0.05			0.0				
3/5 1400	---	50	10.5	93	58	7.0	^c 0.12	3.0 0.13		0.0 0.00	24 0.39		2.0 0.06			0.0				
4/2 1429	1304	54	9.0	84	60	7.0	^c 0.16	3.4 0.15		0.0 0.00	25 0.41		1.8 0.05			0.1				
5/1 1300	3056	54	10.0	94	48	7.5	5.6 0.28	0.5 0.04	1.0 0.03	0.0 0.00	21 0.34	5.0 0.10	1.3 0.04	0.0 0.00	0.2 0.01	0.0	11	PO ₄ 0.15		
6/4 1400	6016	51	10.0	90	37	6.9	^c 0.18	3.1 0.13		0.0 0.00	12 0.20		0.8 0.02			0.0				
7/2 1300	7180	56	9.0	86	22	7.0	^c 0.13	1.4 0.06		0.0 0.00	10 0.16		2.0 0.06			0.0				
8/1 1330	---	61	11.5	116	19	6.5	^c 0.15	1.1 0.05		0.0 0.00	8.5 0.14		0.8 0.02			0.0				
9/3 1130	2302	62	9.7	99	22	7.1	2.5 0.12	0.5 0.04	0.2 0.01	0.0 0.00	10 0.16	1.6 0.03	0.8 0.02	0.1 0.00	0.1 0.01	0.0	5.8	PO ₄ 0.05		
10/1 1240	1038	68	10.0	110	31	6.9	^c 0.20	1.7 0.07		0.0 0.00	14 0.23		1.2 0.03			0.0				
11/5 1400	50	66	11.0	30	118	6.7	^c 0.21	1.4 0.06		0.0 0.00	14 0.23		1.2 0.03			0.0				
12/3 1320	---	60	11.2	102	31	7.4	^c 0.21	1.6 0.07		0.0 0.00	13 0.21		0.2 0.01			0.0				

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.
0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
LINDSEY SLOUGH NEAR RIO VISTA (STA. 110)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃		Turbidity in ppbm	Coliform ^b MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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^a Field pH.^b Laboratory pH.^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves.^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Temescal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 2-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
LITTLE POTATO SLOUGH AT TERMINOUS (STA. 99)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	a pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent solum	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform ^b MPN/ml	Analyzed by ^c																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{VI}), reported here as $\frac{0.0}{0.00}$ except as shown.

e Derived from conductivity vs TDS curves

f Determined by difference of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (N. 5)

McCLOUD RIVER ABOVE SHASTA LAKE (STA. 18)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Per-cent sodium	Hardness as CaCO ₃		Tur-bidity in ppm	Coliform MPN/ml	Analyzed by
			ppm	%Sat			equivalents																
							Calcium (Ca)	Magne-sium (Mg)	Sodium (Na)	Potas-sium (K)	Carbon-ate (CO ₃)	Bicar-bonate (HCO ₃)	Sul-fate (SO ₄)	Chlo-ride (Cl)	Ni-troate (NO ₃)	Fluo-ride (F)			Boron (B)	Silico (SiO ₂)			
1/8 1055	1,270	45	11.7	97	99	7.3 7.9	0.83 ^c	3.2 0.17		0 0.00	52 0.97		1.0 0.03			0.0			42	0	1	Maximum 230.	USGS
2/12 1340	5,280	45	11.4	94	73	7.2 7.6	0.68 ^c	2.2 0.10		0 0.00	40 0.66		1.8 0.05			0.0			34	1	15	Minimum 0.66	
3/12 1330	1,850	45	11.2	93	97	7.3 7.8	0.66 ^c	3.7 0.15		0 0.00	52 0.85		2.0 0.06			0.0			44	1	6	Median 6.2	
4/9 1400	2,460	49	11.3	98	86	7.5 7.8	0.72 ^c	3.7 0.16		0 0.00	49 0.80		2.0 0.06			0.0			35	0	11		
5/1 1310	1,910	62	9.6	98	95	7.5 7.8	1.1 0.55	4.3 0.19	0.2 0.02	0 0.00	54 0.89	2.8 0.06	1.4 0.04	0.0 0.00	0.0 0.00	0.0	22	PO ₄ 0.05	40	0	2		
6/11 1215	1,390	54	10.4	96	88	7.7 7.9	0.68 ^c	4.9 0.21		0 0.00	50 0.82		3.4 0.10			0.0			34	0	10		
7/5 1050	1,140	55	10.6	100	96	7.8 8.1	0.76 ^c	5.5 0.24		0 0.00	54 0.89		1.0 0.03			0.0			38	0	2		
8/13 1035	1,010	54	10.4	96	95	7.7 7.9	0.60 ^c	5.5 0.24		0 0.00	56 0.92		0.5 0.01			0.0			40	0	1		
9/12 0900	952	53	10.6	97	95	7.7 7.8	0.46	3.2 0.26	1.1 0.03	0 0.00	55 0.90	1.0 0.02	1.5 0.04	0.2 0.00	0.0 0.00	0.0	24	PO ₄ 0.10	36	0	3		
10/3 0900	964	51	11.2	100	95	7.5 7.8	0.60 ^c	5.4 0.23		0 0.00	58 0.95		0.8 0.02			0.0			40	0	5		
11/14 1045	1,140	47	11.7	99	97	7.3 7.9	0.75 ^c	5.7 0.25		0 0.00	55 0.90		2.5 0.07			0.0			38	0	5		
12/11 0800	1,390	45	12.2	101	96	7.3 8.0	0.77 ^c	4.0 0.17		0 0.00	57 0.93		0.5 0.01			0.0			38	0	8		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs. TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-114
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

MERCED RIVER BELOW EXCHEQUER DAM (STA. NO 32a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent Car- bon- ate in ppm	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform ^b MPN/ml	Analyzed by ⁱ	
			ppm	% Sat			equivalents																	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
1962 1/10 1115 2/ 3/7 1215 4/11 0835 5/10 1130 6/8 0810 7/13 0830 8/7 0855 9/4 1115 10/5 0855 11/9 1000 12/7 0915	35	50	11.9	106	125	7.8	103 ^c	3.7 0.16				53 0.87							13	51	8	9	Median 18. Maximum 1300. Minimum 0.06	USGS

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

MERCED RIVER NEAR STEVINSON (STA. NO. 32)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by		
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potass- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)
1962																			USGS				
1/11 1345	101	50	11.7	104	8.2	^c 1.77		26 1.13		0.0 0.00	134 2.20		15 0.12			0.0			39	89	0	4	Median 146. Maximum 7000. Minimum 6.2
2/8 1045	111	54	9.4	88	8.1	^c 1.65		25 1.09		0.0 0.00	125 2.05		14 0.39			0.0			40	83	0	10	
3/1 1030	1310	48	10.9	95	7.3	^c 0.78		4.5 0.20		0.0 0.00	42 0.69		2.8 0.06			0.0			20	39	5	10	
4/5 1240	390	65	9.0	95	7.8	^c 1.08		13 0.57		0.0 0.00	74 1.21		8.6 0.24			0.0			35	54	0	25	
5/1 1230	185	64	9.8	102	8.1	14 0.70	5.1 0.42	17 0.74	2.0 0.05	0.0 0.00	80 1.31	11 0.23	9.4 0.27	1.6 0.03	0.2 0.01	0.0	20	ABS POLY 1.7	39	56	0	15	
6/5 1150	2680	62	9.7	99	7.0	^c 0.29		2.0 0.09		0.0 0.00	19 0.31		0.8 0.02			0.0			24	15	0	15	
7/3 1100	402	74	7.6	88		^c 1.10		17 0.74		0.0 0.00	7.8 1.28		10 0.28			0.0			40	55	0	15	
8/9 0715	104	73	7.6	87	7.6	^c 1.28		23 1.00		0.0 0.00	102 1.67		15 0.12			0.1			44	64	0	6	
9/7 1330	150	75	9.8	116	8.0	16 0.80	6.1 0.50	26 1.13	1.8 0.05	0.0 0.00	105 1.72	11 0.23	14 0.39	4.6 0.07	0.2 0.01	0.0	24	AHS POLY 0.20	46	65	0	8	
10/5 1200	173	67	9.4	102	7.9	^c 1.36		20 0.87		0.0 0.00	97 1.59		14 0.39			0.0			39	68	0	15	
11/8 1300	120	62	11.0	112	7.9	^c 1.38		34 1.48		0.0 0.00	150 2.46		19 0.54			0.0			44	94	0	4	
12/6 1245	112	54	10.2	95	8.0	^c 1.84		32 1.39		0.0 0.00	143 2.34		19 0.54			0.0			43	92	0	2	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

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TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

MILL CREEK NEAR MOUTH (STA. 88)

Date and time sampled P.S.T. 1962	Discharges in cfs Est. by Sampler	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by ^h
			ppm	%Sat			equivalents per million																
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)			
1/12 1130	90	43	11.6	94	206	7.3 7.8	1.16 ^c			17 0.74		0 0.00	54 0.89		22 0.62			0.6	58	14	2	Maximum 2,400.	USGS
2/12 1000	770	48	11.0	95	93	7.3 7.3	0.61 ^c			6.1 0.27		0 0.00	38 0.62		5.2 0.15			0.2	30	0	40	Minimum 0.23	
3/12 1000	200	45	11.8	98	147	7.3 7.8	0.92 ^c			11 0.48		0 0.00	54 0.89		12 0.34			0.4	46	2	4	Median 50.	
4/9 1005	100+	52	10.7	97	107	7.3 7.8	0.64 ^c			8.8 0.38		0 0.00	34 0.56		8.2 0.23			0.0	32	4	30		
5/1 0850	100	54	10.6	98	114	7.3 7.7	0.40		3.5 0.29	2.1 0.10	2.0 0.05	0 0.00	37 0.61	1.3 0.27	8.0 0.23	0.4 0.01	0.0 0.00	0.2	34	4	10		
6/20 0820	75	67	8.9	96	122	7.3 7.4	0.76 ^c			8.6 0.37		0 0.00	30 0.49	1.9 0.40	8.8 0.25			0.4	38	13	35		
7/2 1100	35	70	9.1	101	147	7.5 7.8	0.84 ^c			11 0.48		0 0.00	41 0.67		15 0.42			0.3	42	8	4		
8/1 1200	0.5	86	10.6	139	224	8.2 7.9	1.48 ^c			16 0.70		0 0.00	82 1.34		17 0.48			0.5	74	7	5		
9/11 1015	0.5	73	9.2	106	250	7.3 7.7	0.90		9.2 0.76	17 0.74	3.3 0.08	0 0.00	96 1.57	1.4 0.29	20 0.56	0.8 0.01	0.1 0.01	0.4	83	4	5	163 ^f 168 ^g	
10/1 0910	4	65	8.4	88	229	7.3 7.9	1.41 ^c			18 0.78		0 0.00	72 1.18		24 0.68			0.3	70	11	1		
11/1 1100	133	60	10.1	101	179	7.3 7.9	1.08 ^c			14 0.61		0 0.00	51 0.84		14 0.39			0.3	54	12	5		
12/10 1110	209	48	11.8	102	151	7.3 7.8	0.85 ^c			12 0.52		0 0.00	47 0.77		12 0.34			0.3	42	3	3		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.
0.00

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE P-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

MOKELUMNE RIVER BELOW COSUMES RIVER (STA. 23b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million								Total dissolved solids in ppm g	Per- cent sodium in ppm	Hardness as CaCO ₃ Total N.C. ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by i
			ppm	%Sol			equivalents													
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)						
1962	Tidal																			
1/23 1220		44			91		5.1					3.6					80	24		
4/20 1135		56			49		2.5					1.4					48	22		
5/14 1400		62			56		3.0					2.8					60	23		
6/18 1245		67			53		2.1					3.6					60	17		
7/16 1135		72			42		3.0					3.6					68	31		
9/28 1200		71			41		2.3					1.4					20	24		
11/13 1245		60					4.0					4.3						33		
																			USBR	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

MOSELUMBE RIVER BELOW GEORGIANA SLOUGH (STA. 23c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million								Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by			
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)			Ni- trate (NO ₃)	Fluo- ride (F)				Boron (B)	Silico (SiO ₂)	Other constituents
1962 1/23 1045 4/20 1010 5/14 1515 6/18 1205 7/16 1250 8/28 1135 11/13 1320	Tidal	43 58 62 70 75 71 60			173 108 140 163 178 175 152			12 6.4 9.2 9.7 14 13 10						8.5 5.0 6.4 7.8 13 9.9 9.9						114 88 102 126 140 124 124	30 26 29 26 34 32 29			USER

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 2-11h

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
MOKELUMNE RIVER NEAR LANCHIA PLANA (STA. 23a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance at 25°C	a pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent sodium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform ^b MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- sum (K)	Carbon- ate (CO ₃)	Bicor- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlor- ide (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.
0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Division of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 5-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
MOKELUMNE RIVER AT WOODBRIDGE (STA. 23)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm N.C. ppm		Tur- bidity in ppm	Coliform MPN/ml	Analyzed by
						equivalents per million																
			ppm	%Sat		Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)			
1962																						
1/10	67	46	11.7	98	75	0.40 ^c		3.0	4.0	0	11	16	4.2			0.0						
1340							0.13	0.10	0.00	0.18	0.33		0.12									
2/14	362	53	10.9	100	122	0.84 ^c		5.4		0	16		4.8			0.1						
1405							0.23		0.00	0.26			0.14									
3/8	706	49	11.7	102	85	0.60 ^c		3.5		0	19		5.0			0.0						
0945							0.15		0.00	0.31			0.14									
4/5	364	58	10.5	102	71	0.46 ^c		4.2		0	15		6.2			0.1						
1320							0.18		0.00	0.25			0.17									
5/10	265	61	10.2	103	81	0.30	1.2	4.5	3.9	0	2	26	5.0	0.2	0.2	0.0	11	ABS 0.0; PO ₄ 0.00				
1540							0.10	0.20	0.10	0.00	0.03	0.54	0.14	0.00	0.01							
6/11	665	59	10.6	105	61	0.46 ^c		2.9		0	12		5.0			0.0						
1200								0.13		0.00	0.20		0.14									
7/5	238	70	8.8	99	37	0.25 ^c		2.5		0	16		3.5			0.0						
1430								0.11		0.00	0.26		0.10									
8/1	215	71	9.0	102	33	0.20 ^c		2.4		0	14		2.2			0.0						
1425								0.10		0.00	0.23		0.06									
9/6	25	66	9.1	98	43	0.28	0.6	2.5	0.3	0	20	0.0	2.0	0.4	0.0	0.1	12	As 0.00; ABS 0.0; PO ₄ 0.00				
0835							0.05	0.11	0.01	0.00	0.33	0.00	0.06	0.01	0.00							
10/8	114	63	9.4	97	38	0.28 ^c		2.4		0	18		2.4			0.0						
0805								0.10		0.00	0.30		0.07									
11/14	241	57	9.9	95	35	0.28 ^c		2.1		0	16		1.5			0.0						
0940								0.09		0.00	0.26		0.01									
12/4	232	53	10.5	96	35	0.24 ^c		2.5		0	16		3.0			0.0						
0920								0.11		0.00	0.26		0.03									

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
OLD RIVER AT CLIFTON COURT FERRY (STA. 104)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent calcium in ppm	Hardness as CaCO ₃ in ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by
			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO ₃)	Bicarbonates (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Barium (Ba)	Silica (SiO ₂)	Other constituents			
1962	Tidal																	
1/10		45	6.16 ^c		154 6.70		0 0.00	187 3.06		236 6.66							10	USGS
1255																		
2/15		53	2.28 ^c		56 2.44		0 0.00	91 1.49		73 2.06							70	
1320																		
3/8		54	2.44 ^c		63 2.74		0 0.00	98 1.61		73 2.06							25	
1415																		
4/11		68	2.52 ^c		56 2.44		0 0.00	88 1.44		76 2.14							15	
1410																		
5/8		69	2.2 1.10	10 0.85	36 1.57	2.5 0.06	0 0.00	82 1.34	31 0.65	56 1.58	0.3 0.00	0.2 0.01	0.0	1.3	PO ₄ 0.81	31	25	
1450																		
6/5		69	2.00 ^c		42 1.83		0 0.00	74 1.21		62 1.75							30	
1245																		
7/10		76	1.28 ^c		20 0.87		0 0.00	70 1.15		26 0.73							10	
1135																		
8/7		74	1.46 ^c		33 1.44		0 0.00	80 1.31		39 1.10							20	
1220																		
9/6		75	16 0.80	10 0.82	39 1.70	1.9 0.05	0 0.00	86 1.41	22 0.46	50 1.41	1.6 0.03	0.2 0.01	0.0	1.5	PO ₄ 0.15	10	35	
1330																		
10/4		69	1.82 ^c		47 2.04		0 0.00	95 1.56		58 1.64							15	
1120																		
11/13		62	3.40 ^c		89 3.87		0 0.00	139 2.28		129 3.64							15	
1425																		
12/11		51	2.01 ^c		49 2.13		0 0.00	80 1.31		72 2.03							9	
1040																		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-314

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

OLD RIVER AT HOLLAND TRACT (STA. 108a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million								Total dis- solved solids in ppm g	Per- cent Calc- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ⁱ			
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)			Ni- trate (NO ₃)	Fluo- ride (F)				Boron (B)	Silico (SiO ₂)	Other constituents
1962	Tidal																							
1/22 1245		42			539				47						66					38				
2/14 1435		52			785				71						114					39				
3/12 1315		52			588				57						84					42				
4/17 1345					255				22						28					38				
5/15 1250		66			172				13						15					33				
6/19 1005		73			219				16						21					32				
7/17 0935		74			224				20						26					39				
8/14 1040		75			317				32						49					44				
9/17 1035		70			437				49						81					49				
10/16 1325		63			276				28						36					44				
11/14 1050		58			331				31						45					41				
12/17 1420		54			450										67						276			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.
0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE P-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
OLD RIVER AT MANDEVILLE ISLAND (STA. 112)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million equivalents								Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃ ppm		Turbidity in ppm	Coliform MPN/ml	Analyzed by		
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)			Nitrate (NO ₃)	Fluoride (F)				Boron (B)	Silica (SiO ₂)
1962	Tidal																						
1/11 1150		47	10.0	85	333	7.1 7.3	26 1.13		0 0.00	87 1.43		37 1.04			0.1			193 ^e	35	104	33	14	Median 95.
2/15 1410		53	9.8	90	552	7.1 7.9	50 2.18		0 0.00	91 1.49		103 2.91			0.9			320 ^e	41	156	81	50	Maximum >7000. Minimum 2.3
3/8 1410		54	9.6	89	469	7.3 7.9	47 2.04		0 0.00	80 1.31		59 1.66			0.3			272 ^e	46	118	52	35	
4/4 1330		65	8.8	93	375	7.3 7.6	38 1.65		0 0.00	78 1.28		53 1.50			0.2			218 ^e	46	96	32	25	
5/7 1305		73	9.1	105	143	7.3 7.7	9.9 0.43	1.4 0.04	0 0.00	50 0.82	11 0.23	12 0.34	0.7 0.01	0.2 0.01	0.1	17	As 0.01; ABS 0.0; PO ₄ 0.15	93 ^f	31	46	5	110	
6/5 1230		70	8.4	94	192	7.2 7.4	16 0.70		0 0.00	66 1.08		16 0.45			0.0			111 ^e	37	59	5	25	
7/9 1240		75	7.6	90	187	7.4 7.7	16 0.70		0 0.00	69 1.13		16 0.45			0.1			108 ^e	38	58	1	90	
8/2 0945		72	8.0	92	291	7.4 7.5	34 1.48		0 0.00	80 1.31		41 1.16			0.1			169 ^e	51	70	4	15	
9/6 1600		73	7.7	89	414	7.5 7.8	54 2.35	2.6 0.07	0 0.00	86 1.41	41 0.85	72 2.03	0.8 0.01	0.1 0.01	0.1	14	As 0.00; ABS 0.0; PO ₄ 0.00	255 ^f 232 ^g	56	88	17	35	
10/2 1410		71	8.2	93	302	7.5 7.6	33 1.44		0 0.00	96 1.57		37 1.04			0.0			175 ^e	47	82	3	30	
11/13 1415		61	9.3	94	317	7.5 7.4	29 1.26		0 0.00	92 1.51		38 1.07			0.1			184 ^e	42	88	13	15	
12/5 1140		53	9.5	87	350	7.3 7.7	34 1.48		0 0.00	94 1.54		45 1.27			0.1			203 ^e	44	95	18	8	USGS

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBOPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 1-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
OLD RIVER AT ORWOOD BRIDGE (STA. 108)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃		Turbidity in N.C. ppm	Coliform ^h MPN/ml	Analyzed by ⁱ	
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
1962	Tidal																							
1/11 1215		48	8.8	75	982	7.1 7.9	5.42 ^c		97 4.22		0 0.00	118 1.93		141 3.98			0.4					35	Median 130. Maximum >7000. Minimum 5.	USGS
2/15 1115		53	7.9	72	1390	7.3 7.6	6.69 ^c		164 7.13		0 0.00	160 2.62		234 6.60			0.8					40		
3/8 1205		54	8.9	83	603	7.2 8.0	2.62 ^c		69 3.00		0 0.00	99 1.62		66 1.86			0.4					30		
4/11 1120		66	8.0	86	452	7.3 7.9	2.22 ^c		47 2.04		0 0.00	86 1.41		64 1.81			0.2					35		
5/8 1215		70	7.3	82	202	7.1 7.5	1.3 0.65	6.7 0.55	16 0.70	1.8 0.05	0 0.00	61 1.00	17 0.35	20 0.56	0.7 0.01	0.2 0.01	0.0	15		PO ₄ 0.69		35		
6/6 1200		72	7.2	82	235	7.2 7.9	1.36 ^c		21 0.91		0 0.00	68 1.11		27 0.76			0.0					50		
7/10 1330		78	6.7	81	205	7.3 7.4	1.18 ^c		18 0.78		0 0.00	70 1.15		19 0.54			0.0					50		
8/6	Not Sampled																							
9/6 1200		75	6.9	81	373	7.3 7.5	1.6 0.80	10 0.86	44 1.91	2.0 0.05	0 0.00	86 1.41	23 0.48	60 1.69	1.1 0.02	0.2 0.01	0.0	14		PO ₄ 0.15		25		
10/4 0930		69	7.5	83	367	7.3 7.5	1.81 ^c		42 1.83		0 0.00	96 1.57		53 1.50			0.0					25		
11/13 1205		60	8.2	82	625	7.4 7.7	2.88 ^c		68 2.96		0 0.00	120 1.97		98 2.76			0.1					15		
12/10 1150		51	7.9	70	556	7.3 7.6	2.42 ^c		58 2.52		0 0.00	96 1.57		86 2.43			0.2					15		

^a Field pH.

^b Laboratory pH.

^c Sum of calcium and magnesium in epm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents.

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 3-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
OLD RIVER NEAR TRACY (STA. 103)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micro-mhos at 25°C)	pH ^a	Mineral constituents in parts per million equivalents per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform ^b MPN/ml	Analyzed by ¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
1962	Tidal																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

^a Field pH

^b Laboratory pH

^c Sum of calcium and magnesium in ppm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁺⁶), reported here as 0.0 except as shown.
0.00

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents.

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE E-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

PAYNES CREEK NEAR RED BLUFF (STA. 88g)

Date and time sampled P.S.T. 1962	Discharge in cfs Est. by Sampler	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by						
			ppm	% Sat			equivalents per million																					
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents			
1/10 1620	18	54	10.2	94	213	7.5 8.1	1.17 ^c 0.74		17 0.74	0 0.00	108 1.77		15 0.42				0.3			33	74	0	2					USGS
2/14 1035	500	49	10.6	92	75	7.2 7.5	0.64 ^c 0.17		3.8 0.17	0 0.00	39 0.64		2.0 0.06				0.0			21	32	0	50					
3/13 1545	35	56	10.1	96	124	7.5 7.7	0.96 ^c 0.33		7.7 0.33	0 0.00	66 1.08		4.8 0.14				0.1			26	48	0	3					
4/11 1010	10	60	10.5	105	168	7.6 8.0	1.24 ^c 0.61		14 0.61	0 0.00	90 1.48		7.2 0.20				0.2			33	62	0	3					
5/3 0915	10	65	9.3	98	184	7.4 7.6	1.2 0.60	7.8 0.64	14 0.61	1.5 0.04	24 1.54	2.0 0.04	9.5 0.27	0.3 0.00			0.2	46	PO ₄ 0.20	32	62	0	4					
6/8 1100	20	69	9.4	103	205	7.3 8.1	1.52 ^c 0.70		16 0.70	0 0.00	107 1.75		13 0.37				0.4			32	76	0	3					
7/2 1330	18	73	12.2	140	205	8.3 8.2	1.44 ^c 0.70		16 0.70	0 0.00	108 1.77		13 0.37				0.2			33	72	0	2					
8/1 1415	5	76	10.5	124	216	8.0 8.1	1.44 ^c 0.78		18 0.78	0 0.00	116 1.90		14 0.39				0.5			35	72	0	3					
9/11 1300	20	69	10.8	119	234	7.5 8.0	1.4 0.70	10 0.84	19 0.83	1.3 0.03	119 1.95	0.0 0.00	16 0.45	1.0 0.02			0.4	47	PO ₄ 0.15	35	77	0	3			168 ^f 183 ^g		
10/1 1130	20	65	9.8	103	235	7.3 8.3	1.57 ^c 0.87		20 0.87	3 0.10	116 1.90		18 0.51				0.3	Tot. Alk. 122		36	79	0	2					
11/21 1300	20	60	10.1	101	231	7.4 7.7	1.65 ^c 0.83		19 0.83	0 0.00	119 1.95		14 0.39				0.3			33	82	0	5					
12/19 1125	50	49	11.3	98	113	7.3 7.9	0.85 ^c 0.27		6.1 0.27	0 0.00	64 1.05		2.2 0.08				0.0			24	42	0	10					

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

PITT RIVER NEAR BIERER (STA. 17e)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Per- cent sodium	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by		
							ports per million																	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)
1/6/62																								
1/10 0930	26	33	11.5	80	264	7.7 7.8	150 ^c 1.13		25 1.13		0 0.00	136 2.23		5.8 0.10			0.1			43	75	0	15	USGS
2/13 1035	355	33	11.7	81	131	7.1 7.1	10 ^c 0.76 ^c		10 0.44		0 0.00	54 0.89		1.8 0.05			0.1			37	38	0	50	
3/13 0930	488	37	10.7	79	220	7.5 7.9	22 1.32 ^c		22 0.96		0 0.00	10 ^c 1.74		8.0 0.23			0.0			42	66	0	120	
4/10 1200	708	55	9.3	88	152	7.7 7.6	12 1.16 ^c		12 0.52		0 0.00	85 1.39		2.8 0.08			0.1			31	58	0	90	
5/2 1120	67	63	9.0	93	223	8.3 7.8	17 0.55	8.4 0.69	21 0.91	3.2 0.10	0 0.00	121 1.98	11 0.23	11 0.31	0.3 0.00	0.1 0.01	0.2	21	PO ₄ 0.00	36	77	0	20	
6/14 0800	8.7	60	7.9	79	275	8.3 6.3	180 ^c 1.80 ^c		30 1.30		2 0.07	153 2.51		7.5 0.21			0.1		Tot. Alk. 158	42	90	0	3	
7/10 0915	23	70	7.7	86	300	8.5 8.5	172 ^c 1.72 ^c		34 1.70		7 0.23	157 2.57		8.2 0.23			0.1		Tot. Alk. 171	51	86	0	5	
8/15 1110	0.7	72	11.1	126	307	8.4 9.8	186 ^c 0.86 ^c		57 2.46		57 1.90	45 0.74		16 0.45			0.0		Tot. Alk. 160	74	43	0	2	
9/17 1235	0																			37	32	0	80	
10/16 1500	8,270	48	7.7	66	98	7.0 7.3	104 ^c 0.104 ^c		8.7 0.38		0 0.00	50 0.82		3.0 0.08			0.1							
11/19 1425	224	45	12.2	101	240	8.1 8.1	156 ^c 1.56 ^c		22 0.96		0 0.00	137 2.25		7.5 0.21			0.0			38	76	0	9	
12/17 1200	830	45	10.0	83	149	7.5 7.6	102 ^c 1.02 ^c		12 0.52		0 0.00	85 1.39		1.8 0.05			0.1			34	51	0	45	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in eqm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

PIT RIVER NEAR CANBY (STA. 17a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhm/cm at 25°C)	pH a/b	Mineral constituents in parts per million equivalents per million											Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ	
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carban- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Baron (B)							Silica (SiO ₂)
1/10 1045	35	39	10.6	80	7.9 7.4	1.62 ^c		35 1.52		0 0.00	163 2.07		13 0.37			0.1		46	91	0	20	Maximum 2,400.	
2/13 1125	630	37	10.2	75	7.4 7.3	0.94 ^c		15 0.65		0 0.00	72 1.18		5.1 0.14			0.0		41	47	0	400	Minimum 0.62	
3/13 1010	150	39	10.5	80	7.7 7.6	1.60 ^c		28 1.22		0 0.00	134 2.20		12 0.34			0.0		42	84	0	200	Median 26.	
4/10 1320	385	53	9.3	85	7.5 8.0	0.90 ^c		29 0.43		0 0.00	62 1.02		14 0.39			0.1		31	48	0	75		
5/2 1315	170	65	8.8	93	7.9 7.8	2.00	6.7 0.55	21 0.91	4.9 0.13	0 0.00	126 2.07	13 0.27	5.2 0.15	0.5 0.01	0.2 0.01	0.1		170 ^f	35	77	0	20	
6/14 0925	13	67	8.0	86	8.0 8.2	1.88 ^c		34 1.48		0 0.00	166 2.72		8.0 0.23			0.0		44	94	0	15		
7/10 1525	32	78	7.7	93	8.2 8.2	2.12 ^c		34 1.48		0 0.00	186 3.05		6.0 0.17			0.2		41	106	0	15		
8/15 1300	45	72	7.3	83	7.8 7.4	2.26 ^c		32 1.39		0 0.00	187 3.06		8.6 0.24			0.0		38	113	0	5		
9/17 1430	16	71	9.3	104	8.1 8.1	2.7 1.35	12 0.95	38 1.65	6.0 0.15	0 0.00	202 3.31	19 0.40	9.5 0.27	0.9 0.01	0.2 0.01	0.1		247 ^f 2488	40	115	0	35	
10/16 1620	3,090	48	8.4	72	7.2 7.4	0.78 ^c		13 0.57		0 0.00	63 1.03		4.0 0.11			0.1		42	39	0	100		
11/19 1610	14	45	11.5	95	7.3 8.1	1.53 ^c		23 1.00		0 0.00	136 2.23		7.5 0.21			0.0		40	76	0	15		
12/17 1330	348	45	10.0	83	7.5 7.9	1.24 ^c		18 0.78		0 0.00	106 1.74		5.8 0.16			0.1		39	62	0	50		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 3-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

PTT RIVER NEAR MONTGOMERY CREEK (STA. 17)

Date and time sampled PST 1962	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by	
							equivalents per million																
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)
1/9 1655	3,320	46	11.5	97	153	7.5 8.1	1.10 ^c		1.0 0.44		0 0.00	88 1.44		3.3 0.09				0.0		55	0	4	Maximum 7,000.0
2/13	NOT SAMPLED																						Minimum 0.02
3/13	NOT SAMPLED																						Median 6.2
4/10 0930	5,040	53	10.4	95	128	7.7 8.1	1.04 ^c		8.4 0.37		0 0.00	72 1.18		6.0 0.17			0.1			52	0	15	
5/2 0845	2,070	57	9.5	91	126	7.7 8.2	1.1 0.55	5.1 0.42	8.3 0.36	1.2 0.05	0 0.00	72 1.18	2.0 0.04	3.6 0.10	0.1 0.00		0.0	0.0	22	48	0	5	
6/11 1500	4,230	66	9.0	96	160	8.2 8.2	1.20 ^c		12 0.52		0 0.00	72 1.51		3.0 0.08			0.1			60	0	15	
7/3 0940	3,080	66	9.4	100	154	8.1 8.6	1.05 ^c		11 0.48		0 0.00	84 1.36		5.2 0.15			0.0	0.0		53	0	3	
8/2 1000	3,020	68	9.4	102	149	8.2 8.2	1.14 ^c		11 0.48		0 0.00	88 1.44		3.4 0.10			0.0	0.0		57	0	2	
9/17 0920	3,050	63	8.7	90	165	7.6 8.1	1.3 0.65	6.4 0.53	12 0.52	2.1 0.05	0 0.00	80 1.46	5.0 0.10	6.0 0.17	0.8 0.01	0.1 0.01	0.2	31	59	0	3		
10/16 0845	17,200	49	11.5	100	98	7.4 7.2	0.64 ^c		8.6 0.37		0 0.00	52 0.85		3.2 0.09			0.0	0.0		32	0	80	
11/19 1035	3,950	48	11.3	97	152	7.3 7.9	1.10 ^c		10 0.44		0 0.00	90 1.48		4.0 0.13			0.0	0.0		24	0	2	
12/17 0840	8,970	49	11.1	97	118	7.4 8.0	0.89 ^c		7.0 0.30		0 0.00	68 1.11		2.3 0.06			0.0	0.0		44	0	2	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

PTT RIVER, SOUTH FORK NEAR LIKELY (STA. 18a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhm/cm at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ ppm		Turbidity in ppm	Coliform MPN/ml	Analyzed by		
			ppm	% Sat			equivalents per million																		
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	
1/22 1210	12	32	12.4	85	144	7.5 7.4	0.86	4.8 0.21	0.00	65 1.07		0.0 0.00	0.0 0.00				0.0 0.0			20	43	0	2	Maximum 2,400.	USGS
2/13 1325	21.0	43	10.7	86	135	7.0 7.8	1.00 ^c	7.1 0.31	0.00	64 1.05		1.8 0.05	0.0				0.0 0.0			24	50	0	15	Minimum 1.3	
3/13 1120	30	33	12.0	83	138	7.7 7.8	1.00 ^c	8.3 0.36	0.00	77 1.25		2.2 0.06	0.0				0.1 0.1			25	53	0	10	Median 62.	
4/10 1510	20	59	8.6	84	92	8.1 8.1	0.72 ^c	6.5 0.29	0.00	54 0.89		0.8 0.02	0.0				0.1 0.1			29	36	0	13		
5/2 1500	89	61	8.4	85	88	8.1 7.5	0.42	4.6 0.27	2.1 0.05	21 0.84	0.8 0.02	0.9 0.03	0.4 0.01	0.1 0.01		PO ₄ 0.15	0.0 0.0	28	74 ^f	21	35	0	8		
6/14 1125	134	57	8.7	84	105	8.4 7.9	0.88 ^c	5.7 0.25	0.00	62 1.02		1.5 0.04	0.0				0.0 0.0			22	44	0	10		
7/12 0745	51	56	8.8	84	132	8.0	1.00 ^c	7.9 0.34	0.00	76 1.25		1.8 0.05	0.0				0.0 0.0			25	50	0	5		
8/15 1420	102	70	6.7	74	144	8.4 8.0	1.04 ^c	9.9 0.43	0.00	83 1.36		2.5 0.07	0.0				0.0 0.0			29	52	0	10		
9/18 1135	32	68	8.5	92	155	8.4 8.1	0.70	11 0.36	4.0 0.10	86 1.41	5.0 0.10	2.5 0.07	2.4 0.04	0.1 0.01		PO ₄ 0.40	0.0 0.0	31	116 ^f 138 ^g	29	53	0	20		
10/17 0920	59	42	11.2	89	117	7.4 7.5	1.00 ^c	6.1 0.27	0.00	62 1.02		1.8 0.05	0.0				0.0 0.0			21	50	0	8		
11/20 0955	40	39	11.6	88	102	7.8 7.8	0.79 ^c	5.7 0.25	0.00	64 1.05		0.8 0.02	0.0				0.0 0.0			24	39	0	2		
12/17 1550	70	42	10.9	87	101	7.5 8.0	0.77 ^c	5.1 0.22	0.00	60 0.95		0.6 0.02	0.0				0.0 0.0			22	39	0	4		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
PUTAH CREEK NEAR WINTERS (STA. 81)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (at 25°C)	pH ^a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent solid- um in ppm	Hardness as CaCO ₃ in ppm	Tur- bidity in ppm	Coliform ^b MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potass- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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^a Field pH^b Laboratory pH.^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves^f Determined by addition of analyzed constituents^g Gravimetric determination^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

RED BANK CREEK NEAR RED BLUFF (STA. 884)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhms at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Per-cent sodium	Hardness as CaCO ₃		Tur-bidity in ppm	Coliform MPN/ml	Analyzed by ¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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							Calcium (Ca)	Magne-sium (Mg)	Sodium (Na)	Potas-sium (K)	Carbon-ate (CO ₃)	Bicar-bonate (HCO ₃)	Sul-fate (SO ₄)	Chlo-ride (Cl)	Ni-trate (NO ₃)	Fluo-ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
ROCK SLOUGH NEAR KNIGHTSEN (STA. 109)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	a pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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a Field pH.

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE F-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BEND (SEA. 12c)

Date and time sampled P.S.T.	Discharge in cfs	Temp. in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by				
			ppm	%Sol			equivalents per million																			
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents	
1/12 101C	4,141	48	12.1	87	145	7.3 6.1	1.12 ^c	7.8 0.34 ^d				0.00	72 1.18		5.6 0.16			0.0								USGS
2/12 1130	13,400	50	10.3	91	111	7.3 7.4	0.84 ^c	6.1 0.27				0.00	48 0.79		2.0 0.06			0.0								
3/14 0810	11,200	48	11.0	95	135	7.2 7.1	1.04 ^c	6.6 0.29				0.00	54 0.89		4.0 0.11			0.0								
4/11 1050	5,320	57	10.3	99	128	7.4 6.0	1.02 ^c	6.8 0.30				0.00	62 1.02		5.2 0.15			0.1								
5/3 1020	9,210	54	10.6	98	123	7.3 7.2	0.60	6.5 0.28	4.6 0.36		1.3 0.03	0.00	60 0.96	1.0 0.21	4.4 0.12	0.3 0.00	0.1 0.01	0.0	26		PO ₄ 0.00 As 0.00 ABS 0.00					
6/8 1210	9,090	53	10.7	98	117	7.4 7.8	0.96	6.1 0.27				0.00	63 1.03		2.5 0.07			0.0								
7/2 1445	10,400	53	10.6	97	115	7.4 7.2	0.88 ^c	6.4 0.28				0.00	60 0.96		4.0 0.11			0.0								
8/1 1510	10,700	54	11.0	102	114	7.6 7.8	0.88 ^c	6.7 0.29				0.00	62 1.02		2.5 0.07			0.0								
9/11 1530	7,110	56	11.0	105	111	7.4 8.0	0.55	5.8 0.25	4.0 0.33		1.0 0.03	0.00	62 1.02	3.8 0.08	3.0 0.08	0.6 0.01	0.0 0.00	0.0	24		PO ₄ 0.00 As 0.01 ABS 0.0					
10/1 1230	6,440	57	11.1	107	115	7.3 7.7	0.92 ^c	6.7 0.29				0.00	63 1.03		4.2 0.12			0.0								
11/1 1345	7,010	56	10.5	100	121	7.2 7.6	0.94 ^c	6.0 0.26				0.00	66 1.06		3.0 0.06			0.2								
12/7 1400	9,430	53	10.4	95	131	7.3 8.0	0.98 ^c	8.0 0.35				0.00	70 1.15		3.6 0.10			0.0								

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in gpm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BEND (STA. 12c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (microhms at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved Solids in ppm	Per- cent sol- idum in ppm	Hardness as CaCO ₃ in ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by
							equivalents															
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)						
1/1-10					148	7.4	13 0.07	5.6 0.4	8.3 0.3	1.7 0.04	0 0.00	74 1.21	6.8 0.14	4.4 0.12	0.6 0.01	0.1 0.01	0.0	28	Fe 0.04 Cu 0.01	Zn 0.02	USGS	
1/11-1					141	7.4	12 0.06	5.6 0.4	8.0 0.3	1.4 0.04	0 0.00	70 1.15	6.6 0.14	4.0 0.11	0.6 0.01	0.2 0.01	0.0	26	Fe 0.06 Cu 0.01	Zn 0.00		
1/12-1					141	7.4	12 0.06	5.7 0.4	7.9 0.3	1.4 0.04	0 0.00	68 1.11	6.4 0.17	4.3 0.12	0.6 0.01	0.2 0.01	0.0	26	Fe 0.08 Cu 0.01	Zn 0.00		
2/1-1					143	7.4	12 0.06	5.8 0.4	8.4 0.3	1.4 0.04	0 0.00	68 1.11	6.4 0.19	4.8 0.14	0.7 0.01	0.2 0.01	0.1	26	Fe 0.05 Cu 0.02	Zn 0.11		
2/1-16					140	7.0	8.7 0.43	4.1 0.34	4.9 0.21	1.1 0.03	0 0.00	41 0.67	10 0.21	2.8 0.06	0.4 0.01	0.2 0.01	0.0	18	Fe 0.12 Cu 0.00	Zn 0.04		
2/17-28					128	7.4	11 0.35	5.5 0.45	6.0 0.29	1.1 0.03	0 0.00	61 1.00	2.0 0.19	3.2 0.11	0.7 0.01	0.1 0.01	0.1	24	Fe 0.18 Cu 0.02	Zn 0.08		
3/1-10					121	7.5	10 0.35	4.2 0.40	6.8 0.39	1.1 0.03	0 0.00	57 0.93	2.0 0.19	3.0 0.08	0.4 0.01	0.2 0.01	0.1	22	Fe 0.14 Cu 0.01	Zn 0.13		
3/1-20					131	7.4	12 0.36	5.6 0.46	7.4 0.35	1.1 0.03	0 0.00	61 1.07	11 0.25	4.2 0.11	0.4 0.01	0.2 0.01	0.0	24	Fe 0.15 Cu 0.01	Zn 0.13		
3/21-41					140	7.1	14 0.7	4.1 0.34	7.4 0.32	1.4 0.03	0 0.00	44 1.09	10 0.21	4.2 0.12	0.6 0.01	0.2 0.01	0.0	24	Fe 0.07 Cu 0.02	Zn 0.13		
4/1-1					155	7.2	11 0.55	6.0 0.49	6.8 0.39	1.1 0.03	0 0.00	61 1.07	2.0 0.19	3.8 0.11	0.2 0.00	0.1 0.01	0.0	23	Fe 0.04 Cu 0.10	Zn 0.07		
4/11-2					127	7.2	13 0.6	3.8 0.31	7.3 0.32	1.1 0.03	0 0.00	63 1.03	8.0 0.17	3.0 0.08	0.2 0.00	0.2 0.01	0.0	25	Fe 0.03 Cu 0.04	Zn 0.06		
4/1-3					123	7.1	15 0.68	4.1 0.34	6.8 0.39	1.4 0.03	0 0.00	63 1.03	2.0 0.19	3.0 0.08	0.3 0.00	0.1 0.01	0.0	25	Fe 0.08 Cu 0.03	Zn 0.04		
4/1-11					121	7.1	11 0.35	5.4 0.44	7.0 0.39	1.1 0.03	0 0.00	62 1.02	7.0 0.15	4.2 0.12	1.1 0.02	0.2 0.01	0.0	24	Fe 0.04 Cu 0.02	Zn 0.12		
4/1-2					122	7.4	12 0.60	5.0 0.41	7.0 0.39	1.1 0.03	0 0.00	64 1.05	7.0 0.15	4.0 0.11	0.8 0.01	0.1 0.01	0.0	23	Fe 0.03 Cu 0.03	Zn 0.15		
4/21-31					121	7.6	11 0.35	4.7 0.39	7.4 0.32	1.1 0.03	0 0.00	60 1.00	7.0 0.15	3.5 0.10	0.8 0.01	0.1 0.01	0.0	24	Fe 0.04 Cu 0.03	Zn 0.12		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BEND (STA. 12c continued)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per-cent solid-um	Hardness as CaCO ₃ Total ppm	Tur-bid-ity in ppm	Coliform MPN/ml	Analyzed by ⁱ
			ppm	% Sat			equivalents per million															
							Calcium (Ca)	Magne-sium (Mg)	Sodium (Na)	Potas-sium (K)	Carbon-ate (CO ₃)	Bicar-bonate (HCO ₃)	Sul-fate (SO ₄)	Chlo-ride (Cl)	Ni-trate (NO ₃)	Fluo-ride (F)						
10/11-14			10 0.50	4.4 0.38	5.8 0.25	1.5 0.04	0 0.00	48 0.79	11 0.23	3.9 0.11	3.1 0.05	0.2 0.01	0.0	23	Fe 0.16 Cu 0.00	Zn 0.03	87 ^f	22	43	4		USGS
10/15-31			11 0.55	4.7 0.39	6.5 0.28	1.1 0.03	0 0.00	64 1.05	6.4 0.13	2.7 0.08	1.5 0.02	0.2 0.01	0.0	26	Fe 0.09 Cu 0.00	Zn 0.06	92 ^f 90 ^g	22	47	0		
11/1-10			11 0.55	5.5 0.45	7.6 0.33	2.0 0.05	0 0.00	69 1.13	6.0 0.12	4.2 0.12	1.4 0.02	0.1 0.01	0.1	26	Fe 0.06 Cu 0.01	Zn 0.11	98 ^f 102 ^g	24	50	0		
11/11-20			11 0.55	5.0 0.41	7.3 0.32	2.5 0.06	0 0.00	66 1.08	6.0 0.12	3.4 0.10	1.2 0.02	0.1 0.01	0.0	26	Fe 0.08 Cu 0.01	Zn 0.10	96 ^f 96 ^g	24	48	0		
11/21-30			10 0.50	5.6 0.46	7.5 0.33	2.3 0.05	0 0.00	67 1.10	5.0 0.10	4.8 0.14	1.3 0.02	0.2 0.01	0.1	26	Fe 0.12 Cu 0.01	Zn 0.09	96 ^f 104 ^g	24	48	0		
12/1-14			13 0.65	4.3 0.35	7.8 0.34	1.5 0.04	0 0.00	67 1.10	6.8 0.14	4.5 0.13	1.2 0.02	0.4 0.02	0.1	25	Fe 0.09 Cu 0.02	Zn 0.11	98 ^f 98 ^g	25	50	0		
12/15-19			11 0.55	3.2 0.32	6.6 0.29	1.5 0.04	0 0.00	50 0.96	5.2 0.11	3.6 0.10	1.5 0.02	0.2 0.01	0.1	23	Fe 0.04 Cu 0.02	Zn 0.04	87 ^f 87 ^g	24	43	0		
12/2-31			12 0.60	5.2 0.43	7.5 0.33	1.5 0.04	0 0.00	72 1.16	6.8 0.14	4.4 0.12	1.1 0.02	0.2 0.01	0.0	25	Fe 0.00 Cu 0.05	Zn 0.08	99 ^f 101 ^g	24	52	0		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD), Los Angeles Department of Water and Power (LADWP), City of Los Angeles, Department of Public Health (LADPH), City of Long Beach, Department of Public Health (LBPH), Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BOYERS BEND (STA. 14c)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ ppm	Tur- bid- ity (NPN/ml in ppm)	Coliform ^h (MPN/ml)	Analyzed by ⁱ			
			ppm	% Sat			equivalents																		
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents
1/1-10					183	7.5	15 0.75	7.7 0.63	10 0.44	1.4 0.04	0 0.00	21 1.49	6.4 0.13	6.4 0.18	0.6 0.01	0.1 0.01	0.1 0.01	30	Fe 0.03	123 ^f 126 ^g	24	69	0		USGS
1/11-20					191	7.7	16 0.80	8.0 0.66	11 0.48	1.5 0.04	0 0.00	27 1.59	6.4 0.13	7.7 0.22	1.2 0.02	0.1 0.01	0.1 0.01	30	Fe 0.02	130 ^f 131 ^g	24	73	0		
1/21-31					153	7.5	13 0.65	6.3 0.52	8.8 0.36	1.2 0.03	0 0.00	73 1.20	8.2 0.17	6.0 0.17	0.5 0.01	0.1 0.01	0.1 0.01	25	Fe 0.12 Mg 0.15	105 ^f 108 ^g	24	58	0		
2/1-9					179	7.8	15 0.75	7.5 0.62	10 0.44	1.4 0.04	0 0.00	85 1.39	2.0 0.19	7.9 0.22	0.4 0.01	0.1 0.01	0.1 0.01	22	Fe 0.00	125 ^f 123 ^g	24	69	0		
2/10-20					108	7.6	2.9 0.49	4.3 0.35	5.1 0.22	1.3 0.03	0 0.00	47 0.77	8.0 0.17	3.8 0.11	0.8 0.01	0.2 0.01	0.2 0.01	22	Fe 0.06	79 ^f 95 ^g	20	42	3		
2/21-28					146	7.6	13 0.65	6.0 0.49	7.5 0.33	1.4 0.04	0 0.00	67 1.10	10 0.21	5.5 0.16	0.5 0.01	0.2 0.01	0.2 0.01	24	Fe 0.19	101 ^f 110 ^g	22	57	2		
3/1-10					136	7.4	12 0.60	5.4 0.44	7.5 0.33	1.2 0.03	0 0.00	63 1.03	10 0.21	4.5 0.13	0.9 0.01	0.3 0.02	0.3 0.02	21	Fe 0.18	94 ^f 94 ^g	24	52	0		
3/11-20					172	7.7	15 0.75	7.2 0.59	9.1 0.40	1.3 0.03	0 0.00	81 1.33	11 0.23	5.5 0.16	0.7 0.01	0.3 0.02	0.3 0.02	26	Fe 0.10	116 ^f 109 ^g	23	67	1		
3/21-31					181	7.8	16 0.80	7.8 0.64	9.6 0.42	1.3 0.03	0 0.00	85 1.39	13 0.27	5.8 0.16	0.7 0.01	0.1 0.01	0.1 0.01	24	Fe 0.09	120 ^f 117 ^g	22	72	2		
4/1-10					159	7.6	14 0.70	7.1 0.58	7.8 0.34	1.1 0.03	0 0.00	78 1.28	10 0.21	5.0 0.14	0.0 0.00	0.1 0.01	0.1 0.01	25	Fe 0.02	108 ^f 111 ^g	21	64	0		
4/11-20					155	8.0	14 0.70	6.6 0.54	7.8 0.34	1.2 0.03	0 0.00	76 1.25	9.0 0.19	5.2 0.15	0.2 0.00	0.1 0.01	0.1 0.01	28	Fe 0.02	106 ^f 110 ^g	21	62	0		
4/21-30					149	7.6	14 0.70	5.6 0.46	8.1 0.35	1.2 0.03	0 0.00	74 1.21	2.0 0.19	4.8 0.14	0.2 0.00	0.1 0.01	0.1 0.01	27	Fe 0.02	106 ^f 109 ^g	23	58	0		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE P-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BOYERS BEND (STA. 146 continued)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ	
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)
5/1-10					146	7.7	13 0.65	5.6 0.46	8.4 0.37	1.5 0.04	0	71 1.16	8.4 0.17	4.3 0.12	1.2 0.02	0.1 0.01	0.0	24		104 ^f 106 ^f 103 ^g	24 0		USGS
5/11-20					152	7.7	14 0.70	6.0 0.49	8.7 0.38	1.2 0.03	0	78 1.28	8.0 0.17	5.0 0.14	1.0 0.02	0.1 0.01	0.0	24		106 ^f 103 ^g	24 0		
5/21-31					156	7.8	14 0.70	6.2 0.51	9.3 0.40	1.2 0.03	0	78 1.28	8.0 0.17	4.7 0.13	1.1 0.02	0.0 0.00	0.0	26		108 ^f 107 ^g	24 0		
6/1-10					147	7.4	14 0.70	5.4 0.44	8.4 0.37	1.2 0.03	0	74 1.21	7.0 0.15	7.5 0.21	0.8 0.01	0.1 0.01	0.0	26		106 ^f 116 ^g	24 0		
6/11-20					137	7.4	14 0.70	4.1 0.34	7.6 0.33	1.2 0.03	0	72 1.18	7.0 0.15	2.0 0.06	0.6 0.01	0.0 0.00	0.0	21		98 ^f 91 ^g	24 0		
6/21-30					135	7.3	14 0.70	3.6 0.30	7.4 0.32	1.2 0.03	0	70 1.15	5.0 0.10	4.0 0.11	0.8 0.01	0.1 0.01	0.0	26		96 ^f 102 ^g	24 0		
7/1-10					136	7.7	14 0.70	4.0 0.33	8.2 0.36	0.8 0.02	0	74 1.21	5.0 0.10	3.2 0.09	0.6 0.01	0.0 0.00	0.0	22		101 ^f 107 ^g	26 0		
7/11-20					132	7.6	11 0.55	5.7 0.47	7.7 0.33	1.0 0.03	0	72 1.18	5.0 0.10	3.2 0.09	0.6 0.01	0.1 0.01	0.0	26		95 ^f 94 ^g	24 0		
7/21-31					129	7.6	12 0.60	4.6 0.38	7.8 0.34	0.8 0.02	0	70 1.15	5.0 0.10	3.4 0.10	0.6 0.01	0.0 0.00	0.0	26		94 ^f 97 ^g	25 0		
8/1-10					131	7.5	13 0.65	3.8 0.31	7.7 0.33	1.0 0.03	0	70 1.15	4.6 0.10	3.7 0.10	1.5 0.02	0.0 0.00	0.1	32		101 ^f 101 ^g	25 0		
8/11-20					132	7.6	12 0.60	5.0 0.41	7.7 0.33	1.1 0.03	0	72 1.18	5.2 0.11	3.4 0.10	1.1 0.02	0.0 0.00	0.0	31		104 ^f 104 ^g	24 0		
8/21-31					128	7.7	12 0.60	5.1 0.42	7.2 0.31	0.9 0.02	0	71 1.16	4.4 0.09	3.0 0.08	1.6 0.03	0.0 0.00	0.0	31		102 ^f 93 ^g	23 0		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 2-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BOYERS BEND (STA. 146 continued)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per-cent solum	Hardness as CaCO ₃		Tur-bid-ity in ppm	Coliform MPN/ml	Analyzed by ^h		
			ppm	% Sat			equivalents per million																		
							Calcium (Ca)	Magne-sium (Mg)	Sodium (Na)	Potas-sium (K)	Carbon-ate (CO ₃)	Bicar-bonate (HCO ₃)	Sul-fate (SO ₄)	Chlo-ride (Cl)	Ni-trate (NO ₃)	Fluo-ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	
9/1-10					143	7.1	14 0.70	5.1 0.42	8.6 0.37	1.2 0.03	0 0.00	78 1.26	5.0 0.10	4.8 0.14	1.3 0.02	0.3 0.02	0.0 0.0	27	Fe 0.00		105 ^f 100 ^f	24	56	0	USGS
9/11-20					152	7.0	14 0.70	6.6 0.54	9.0 0.39	1.3 0.03	0 0.00	96 1.41	5.0 0.10	5.0 0.14	1.6 0.03	0.4 0.02	0.1 0.0	28	Fe 0.00		113 ^f 114 ^f	23	62	0	
9/21-30					145	7.1	14 0.70	5.1 0.42	8.4 0.37	1.0 0.03	0 0.00	78 1.28	5.0 0.10	4.4 0.12	1.3 0.02	0.3 0.02	0.0 0.0	26	Fe 0.00		104 ^f 101 ^f	24	56	0	
10/1-12					138	7.3	12 0.60	5.7 0.47	7.6 0.33	1.1 0.03	0 0.00	75 1.23	5.6 0.12	3.5 0.10	1.7 0.03	0.2 0.01	0.0 0.0	27	Fe 0.01		101 ^f 90 ^f	23	53	0	
10/13-17					99	6.9	8.4 1.42	3.6 0.30	5.2 0.23	1.5 0.04	0 0.00	41 0.67	5.6 0.12	3.1 0.09	5.7 0.09	0.2 0.01	0.0 0.0	22	Fe 0.10		75 ^f 72 ^f	23	35	2	
10/18-31					160	7.5	14 0.70	6.1 0.50	9.6 0.42	1.6 0.04	0 0.00	84 1.36	8.2 0.17	5.2 0.15	5.7 0.01	0.2 0.01	0.1 0.0	35	Fe 0.09		122 ^f 130 ^f	25	60	0	
11/1-1					148	7.5	12 0.60	6.1 0.50	8.7 0.36	2.0 0.05	0 0.00	76 1.25	7.0 0.15	5.0 0.14	1.1 0.02	0.1 0.01	0.0 0.0	27	Fe 0.09		106 ^f 110 ^f	25	55	0	
11/11-20					156	7.7	12 0.60	7.1 0.58	9.6 0.42	2.0 0.05	0 0.00	82 1.34	5.6 0.12	5.1 0.15	1.0 0.02	0.2 0.01	0.0 0.0	27	Fe 0.06		110 ^f 108 ^f	25	59	0	
11/21-30					156	7.1	14 0.70	6.0 0.49	8.9 0.39	1.5 0.04	0 0.00	83 1.36	6.4 0.13	5.3 0.15	0.8 0.01	0.1 0.01	0.0 0.0	27	Fe 0.03		111 ^f 107 ^f	24	60	0	
12/1-15					144	7.6	13 0.65	7.4 0.61	8.7 0.36	1.3 0.03	0 0.00	76 1.25	7.4 0.15	6.5 0.18	1.5 0.02	0.1 0.01	0.1 0.0	22	Fe 0.01		115 ^f 111 ^f	23	63	1	
12/16-19					114	7.2	11 0.55	3.8 0.31	6.0 0.20	1.1 0.03	0 0.00	56 0.92	6.6 0.14	6.0 0.17	1.4 0.02	0.1 0.01	0.0 0.0	25	Fe 0.01		89 ^f	23	43	0	
12/20-27					143	7.5	13 0.65	6.7 0.55	8.1 0.35	1.2 0.03	0 0.00	74 1.21	5.4 0.11	7.0 0.20	1.1 0.02	0.1 0.01	0.1 0.0	28	Fe 0.00		107 ^f 108 ^f	22	60	0	

^a Field pH

^b Laboratory pH

^c Sum of calcium and magnesium in ppm

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents

^g Gravimetric determination

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BUTTE CITY (STA. 87a.)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen	Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sand - silt - clay	Hardness as CaCO ₃ in ppm	Turbidity in ntu	Coliform ^h MPN/ml	Analyzed by i					
						equivalents per million																				
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents		
1/12 0920	4,810	50	10.5	93	169	7.3 8.0	1.28 ^e		10 0.44		0 0.00	82 1.34		5.5 0.16				0.0			26	64	0	2	Maximum 7,000.	USGS
2/15 1105	66,900	51	10.4	93	95	7.1 7.4	0.72 ^e		4.5 0.20		0 0.00	36 0.59	7.0 0.15	2.8 0.08				0.1			22	36	6	40	Minimum 5.	
3/15 1110	13,200	51	10.2	91	165	7.3 7.5	1.34 ^e		8.1 0.35		0 0.00	92 1.51		5.5 0.16			0.1			21	67	0	25	Median 23.		
4/13 0915	6,690	63	8.9	92	147	7.3 8.0	1.22 ^e		7.8 0.34		0 0.00	73 1.20		3.8 0.11			0.3			22	61	1	8			
5/7 1055	7,210	61	9.7	98	135	7.5 7.9	1.2 0.60	4.9 0.40	7.3 0.32	1.2 0.03	0 0.00	68 1.11	7.0 0.15	3.2 0.09	0.0 0.00	0.3 0.02	0.1	23	PO ₄ 0.10	92 ^f	24	50	0	20		
6/18 1335	7,350	66	9.5	101	125	7.7 7.8	1.02 ^e		6.8 0.30		0 0.00	65 1.07		3.2 0.09			0.1			23	51	0	15			
7/17 1130	7,830	64	9.6	100	122	7.7 7.9	0.94 ^e		7.1 0.31		0 0.00	63 1.03		2.8 0.08			0.0			25	47	0	6			
8/20 1205	7,900	63	10.0	103	118	7.6 7.8	0.96 ^e		6.6 0.29		0 0.00	65 1.07		2.6 0.07			0.0			23	48	0	11			
9/19 1215	6,110	64	9.9	103	126	7.6 7.8	1.6 0.80	2.2 0.18	6.6 0.29	0.8 0.02	0 0.00	68 1.11	6.0 0.12	3.0 0.08	0.7 0.01	0.0 0.00	0.0	24	PO ₄ 0.05	92 ^f 96 ^g	22	49	0	4		
10/17 1125	12,200	57	9.5	91	137	7.3 7.7	1.14 ^e		7.0 0.30		0 0.00	58 0.95		5.0 0.14			0.4			21	57	9	90			
11/27 1220	8,550	54	10.6	98	139	7.5 7.7	1.04 ^e		8.5 0.37		0 0.00	73 1.20		3.8 0.11			0.0			26	52	0	30			
12/18 1215	54,000	54	10.0	93	79	7.3 7.4	0.56 ^e		3.8 0.17		0 0.00	40 0.66		2.0 0.05			0.0			23	28	0	170			

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BUTTE CITY (STA. 87a)

Date and time sampled P.S.D.	Discharge Temp in cfs	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in										parts per million					Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃ Total in ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by
		ppm	%Sat		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	equivalents			Fluoride (F)	Boron (B)	Silica (SiO ₂)	Other constituents							
												Chloride (Cl)	Nitrate (NO ₃)	Iron (Fe)											
1/1-10				170	14 0.70	7.1 0.58	2.9 0.43	1.5 0.04	0 0.00	84 1.38	7.2 0.15	5.5 0.16	1.0 0.02	0.1 0.01	0.0	29	Fe 0.03	116 ^f 117 ^g	64	0		USGS			
1/11-19				167	14 0.70	6.9 0.57	2.2 0.40	1.3 0.03	0 0.00	84 1.38	7.0 0.15	5.4 0.15	0.8 0.01	0.1 0.01	0.1	29	Fe 0.03	115 ^f 116 ^g	63	0					
1/20-31				153	12 0.60	6.8 0.56	8.8 0.38	1.3 0.03	0 0.00	72 1.16	9.0 0.19	5.2 0.15	1.0 0.02	0.2 0.01	0.1	27	Fe 0.02	106 ^f 107 ^g	58	0					
2/1-9				162	14 0.70	6.3 0.52	2.1 0.40	1.4 0.04	0 0.00	75 1.23	9.0 0.19	6.8 0.19	0.6 0.01	0.1 0.01	0.1	27	Fe 0.03	111 ^f 114 ^g	61	0					
2/11-19				110	2.8 0.49	4.1 0.34	5.0 0.22	1.2 0.03	0 0.00	47 0.77	8.0 0.17	3.8 0.11	1.9 0.03	0.2 0.01	0.0	19	Fe 0.17	76 ^f 93 ^g	42	3					
2/21-28				148	13 0.65	6.3 0.52	7.7 0.33	1.3 0.03	0 0.00	59 1.13	10 0.21	5.3 0.15	0.5 0.01	0.1 0.01	0.1	24	Fe 0.15	102 ^f 107 ^g	58	1					
3/1-10				139	13 0.65	4.7 0.39	8.0 0.35	1.4 0.04	0 0.00	55 1.07	8.0 0.17	4.2 0.12	0.6 0.01	0.3 0.02	0.1	23	Fe 0.18	95 ^f 102 ^g	52	0					
3/11-22				174	16 0.80	6.8 0.56	9.3 0.40	1.4 0.04	0 0.00	91 1.33	12 0.25	5.8 0.16	0.9 0.01	0.2 0.01	0.1	24	Fe 0.15	117 ^f 112 ^g	68	2					
3/23-30				169	15 0.75	7.2 0.59	2.1 0.40	1.3 0.03	0 0.00	79 1.29	12 0.25	5.2 0.15	0.4 0.01	0.2 0.01	0.1	24	Fe 0.07	114 ^f 108 ^g	67	2					
4/1-10				152	14 0.70	5.8 0.46	8.1 0.35	1.3 0.03	0 0.00	73 1.20	7.0 0.15	4.3 0.12	0.3 0.00	0.2 0.01	0.0	24	Fe 0.02	101 ^f 109 ^g	59	0					
4/11-20				148	14 0.70	5.1 0.42	8.2 0.36	1.4 0.04	0 0.00	72 1.18	8.0 0.17	4.8 0.14	0.6 0.01	0.1 0.01	0.0	25	Fe 0.00	102 ^f 104 ^g	56	0					
4/23-30				139	13 0.65	4.7 0.39	7.4 0.32	1.3 0.03	0 0.00	68 1.11	7.0 0.15	3.5 0.10	0.2 0.00	0.1 0.01	0.0	24	Fe 0.02	94 ^f 91 ^g	52	4					

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in eqm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE R-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BUTTE CITY (STA. 87a continued)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent suspended in ppm	Hardness as CaCO ₃ in ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by			
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Barium (Ba)	Silica (SiO ₂)	Other constituents
5/1-10				137	7.3	12 0.60	5.8 0.48	8.2 0.36	1.4 0.04	0 0.00	69 1.13	7.4 0.15	4.2 0.12	1.0 0.02	0.0 0.00	0.0	25	Fe 0.01	99 ^f 96 ^g	24	54	0		USGS
5/11-20				139	7.2	12 0.60	6.1 0.50	7.8 0.34	1.4 0.04	0 0.00	71 1.16	7.6 0.16	4.0 0.11	0.7 0.01	0.1 0.01	0.0	25	Fe 0.01	100 ^f 99 ^g	23	55	0		
5/23-31				137	7.5	13 0.65	4.7 0.39	7.9 0.34	1.4 0.04	0 0.00	70 1.15	7.0 0.15	3.7 0.10	0.6 0.01	0.1 0.01	0.0	25	Fe 0.01	97 ^f 92 ^g	24	52	0		
6/1-10				133	7.4	13 0.65	4.7 0.39	7.7 0.33	1.3 0.03	0 0.00	66 1.08	7.0 0.15	4.5 0.13	1.0 0.02	0.1 0.01	0.0	25	Fe 0.02	97 ^f 91 ^g	24	52	0		
6/11-20				128	7.3	15 0.75	3.0 0.25	7.3 0.32	1.3 0.03	0 0.00	68 1.11	5.0 0.10	4.4 0.12	0.5 0.01	0.1 0.01	0.0	25	Fe 0.00	95 ^f 91 ^g	24	50	0		
6/21-30				128	7.5	13 0.65	4.5 0.37	7.1 0.31	1.3 0.03	0 0.00	66 1.08	7.0 0.15	4.0 0.11	0.8 0.01	0.2 0.01	0.0	26	Fe 0.00	97 ^f 97 ^g	23	51	0		
7/1-10				128	7.4	11 0.55	4.7 0.39	7.6 0.33	1.3 0.03	0 0.00	68 1.11	5.2 0.11	3.4 0.10	1.1 0.02	0.0 0.00	0.1	25	Fe 0.01	92 ^f 88 ^g	25	47	0		
7/11-20				127	7.5	12 0.60	4.6 0.38	7.0 0.30	1.1 0.03	0 0.00	68 1.11	5.0 0.10	4.0 0.11	0.6 0.01	0.1 0.01	0.1	26	Fe 0.03	94 ^f 90 ^g	23	49	0		
7/23-31				128	7.8	13 0.65	3.8 0.31	7.5 0.33	1.3 0.03	0 0.00	68 1.11	6.8 0.14	3.3 0.09	0.3 0.00	0.0 0.00	0.0	26	Fe 0.04	95 ^f 88 ^g	25	48	0		
8/1-13				126	7.4	11 0.55	4.7 0.39	7.7 0.33	1.1 0.03	0 0.00	68 1.11	5.2 0.11	3.3 0.09	1.4 0.02	0.0 0.00	0.0	32	Fe 0.02	99 ^f 99 ^g	25	47	0		
8/14-15				217	7.5	14 0.70	16 1.28	7.6 0.33	1.1 0.03	0 0.00	74 1.54	28 0.58	3.6 0.10	1.6 0.03	0.0 0.00	0.1	32	Fe 0.04	150 ^f	14	99	22		
8/16-31				130	7.6	13 0.65	4.3 0.35	7.3 0.32	1.1 0.03	0 0.00	70 1.15	5.8 0.12	3.0 0.08	1.3 0.02	0.0 0.00	0.0	33	Fe 0.02	103 ^f 102 ^g	24	50	0		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in gpm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BUTTE CITY (STA. 87a continued)

Date and time sampled P.S.T.	Discharge in cfs in op	Dissolved oxygen ppm	Specific conductance (at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sum	Hardness as CaCO ₃ ppm	Turbidity in ppm	Conform to MPN/ml	Analyzed by
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Silica (SiO ₂)	Other constituents				
9/1-10			128	7.2	12 0.60	5.0 0.41	8.1 0.35	1.1 0.03	0	70 1.15	5.8 0.12	4.2 0.12	0.5 0.01	0.3 0.02	0.1	28	Fe 0.00	50	0	USGS
9/11-19			129	7.2	13 0.65	5.5 0.45	7.4 0.32	1.2 0.03	0	70 1.15	7.0 0.15	3.8 0.11	0.5 0.01	0.3 0.02	0.0	24	Fe 0.00	55	0	
9/21-30			131	8.0	12 0.60	6.1 0.50	7.1 0.31	1.1 0.03	0	72 1.18	7.0 0.15	4.0 0.11	0.2 0.00	0.4 0.02	0.0	23	Fe 0.00	55	0	
10/1-10			131	7.1	11 0.55	5.6 0.46	7.5 0.33	1.3 0.03	0	71 1.16	5.6 0.12	3.4 0.10	1.7 0.01	0.2 0.01	0.1	26	Fe 0.01	50	0	
10/11-16			112	7.0	9.7 0.46	4.3 0.35	6.2 0.27	1.3 0.03	0	50 0.82	7.2 0.15	4.2 0.12	3.5 0.06	0.2 0.01	0.1	22	Fe 0.10	42	1	
10/17-31			137	7.4	12 0.60	5.5 0.45	7.3 0.32	1.2 0.03	0	70 1.15	7.0 0.15	4.0 0.11	1.7 0.03	0.2 0.01	0.0	26	Fe 0.07	52	0	
11/1-10			144	7.3	11 0.55	6.2 0.51	8.0 0.35	1.7 0.04	0	75 1.23	6.0 0.12	4.2 0.12	1.2 0.02	0.1 0.01	0.0	28	Fe 0.00	53	0	
11/11-20			142	7.4	12 0.60	5.5 0.45	8.1 0.35	2.0 0.05	0	75 1.23	5.6 0.12	4.2 0.12	0.9 0.01	0.0 0.00	0.0	26	Fe 0.03	53	0	
11/21-30			146	7.4	12 0.60	5.8 0.48	8.8 0.38	2.2 0.06	0	76 1.25	6.4 0.13	4.8 0.14	1.1 0.02	0.1 0.01	0.0	28	Fe 0.07	54	0	
12/1-14			141	7.2	13 0.65	6.4 0.53	8.1 0.35	1.6 0.04	0	71 1.16	7.0 0.15	6.0 0.19	1.0 0.02	0.1 0.01	0.1	24	Fe 0.00	59	1	
12/15-20			115	7.2	11 0.55	5.5 0.45	6.4 0.28	1.2 0.03	0	59 0.97	7.0 0.15	4.2 0.14	1.5 0.02	0.1 0.01	0.1	24	Fe 0.02	50	2	
12/22-31			137	7.5	13 0.65	5.8 0.48	8.0 0.35	1.2 0.03	0	74 1.21	6.6 0.14	4.9 0.14	1.2 0.02	0.2 0.01	0.1	27	Fe 0.00	57	0	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT COLUSA (STA. 130)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in equivalents per million											Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ^h
						parts per million													Total ppm	N.C. ppm			
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sulfate (SO ₄)	Chlor- ide (Cl)	Ni- trate (NO ₃)	Fluor- ide (F)	Boron (B)							
1/12 1000	4,920	50	10.7	95	7.3 7.3	1.33 ^c	2.6 0.12		0 0.00	94 1.38		2.8 0.16			0.1		66	0	5		USGS		
2/15 1155	35,800	51	10.3	92	7.4 7.4	0.68 ^c	4.1 0.18		0 0.00	36 0.59		3.0 0.05			0.0		34	4	600				
3/15 1115	13,000	52	10.2	93	7.3 7.3	1.30 ^c	7.2 0.34		0 0.00	78 1.28		6.0 0.17			0.0		68	4	40				
4/13 1000	6,600	64	9.0	94	7.2 8.1	1.20 ^c	8.1 0.35		0 0.00	76 1.25		6.5 0.18			0.2		60	0	35				
5/7 0720	6,760	64	9.2	95	7.5 7.4	1.3 0.05	4.7 0.59	7.5 0.53	1.0 0.03	0 0.00	69 1.13	6.4 0.13	5.4 0.15	0.2 0.00	0.0 0.00	24	52	0	15				
6/18 1220	7,531	68	8.9	97	7.7 7.7	1.0 ^c	6.5 0.28		0 0.00	68 1.11		3.2 0.09			0.0		53	0	15				
7/17 0950	7,131	66	9.1	97	7.7 7.7	0.95	8.0 0.29		0 0.00	64 1.09		4.4 0.12			0.0		48	0	5				
8/24 1135	7,620	65	7.5	100	7.5 7.4	0.92 ^c	6.4 0.29		0 0.00	66 1.05		2.2 0.05			0.0		46	0	2				
9/14 0950	5,700	64	7.5	93	7.4 7.4	1.2 0.60	4.6 0.38	6.5 0.28	0.8 0.02	0 0.00	64 1.11	5.0 0.10	2.5 0.07	0.5 0.01	0.0 0.00	24	49	0	15				
10/17 0950	15,400	56	9.4	90	7.1 7.6	0.96 ^c	8.5 0.28		0 0.00	57 0.93		4.8 0.14			0.1		48	1	70				
11/27 1035	6,950	54	10.2	94	7.4 6.6	1.05 ^c	8.4 0.37		0 0.00	76 1.25		5.6 0.16			0.0		53	0	10				
12/16 0500	31,300	55	10.1	95	7.3 7.2	0.69 ^c	5.2 0.23		0 0.00	45 0.74		2.8 0.08			0.0		35	0	140				

^a Field pH

^b Laboratory pH

^c Sum of calcium and magnesium in ppm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER ABOVE COLUSA TROUGH (STA. 14b)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent leadium	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by					
			ppm	%Sat			equivalents per million																				
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents		
1/12 1145	5,724	50	10.6	94	241	7.5 8.1	1.66 ^c		18 0.78		0 0.00	109 1.79		12 0.34			0.1					32	83	0	15	Maximum 2,100.	USGS
2/15 1500	26,500	51	10.2	91	92	7.2	0.76 ^c		4.8 0.21		0 0.00	42 0.69		3.5 0.10			0.0					22	38	4	800	Minimum 2.	
3/9 1205	24,400	50	10.4	92	117	7.3 7.7	0.94 ^c		5.7 0.25		0 0.00	62 1.02		5.1 0.14			0.1					21	47	0	100	Median 62.	
4/6 1240	9,640	63	9.2	95	156	7.4 7.7	1.22 ^c		7.4 0.32		0 0.00	78 1.28		4.2 0.12			0.0					21	61	0	25		
5/7 0755	5,240	68	8.6	93	172	7.5 7.8	1.3 0.65	7.2 0.59	12 0.52	1.0 0.03	0 0.00	79 1.29	13 0.27	6.5 0.18	0.1 0.00	0.0 0.00	0.0	25	PO ₄ 0.10 As 0.00 ABS 0.0		117 ^f	29	62	0	20		
6/18 1110	6,235	69	8.6	95	157	7.5 7.9	1.38 ^c		10 0.44		0 0.00	76 1.25		5.0 0.14			0.0					24	69	7	15		
7/17 0845	6,131	69	8.4	92	154	7.5 7.7	1.08 ^c		11 0.48		0 0.00	75 1.23		5.4 0.15			0.0					31	54	0	10		
8/20 0845	6,774	67	8.9	96	159	7.3 7.8	1.16 ^c		12 0.52		0 0.00	78 1.28		5.5 0.16			0.0					31	58	0	8		
9/19 0825	5,729	68	8.7	95	170	7.5 7.6	1.4 0.70	6.8 0.56	11 0.48	1.0 0.03	0 0.00	86 1.41	2.0 0.19	6.0 0.17	0.8 0.01	0.0 0.00	0.0	24	PO ₄ 0.05 As 0.01 ABS 0.0		115 ^f	27	63	0	35		
10/17 0830	21,600	56	8.8	84	114	7.0 7.1	0.80 ^c		7.6 0.33		0 0.00	47 0.77		5.5 0.16			0.1					29	40	1	60		
11/27 0930	7,200	54	10.1	94	152	7.5 7.7	1.14 ^c		2.3 0.40		0 0.00	79 1.29		5.0 0.14			0.0					26	57	0	25		
12/18 0905	22,000	55	9.6	91	137	7.3 7.5	0.96 ^c		2.3 0.40		0 0.00	62 1.02		5.8 0.16			0.1					29	48	0	50		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.
0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT DELTA (STA. 11)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm %Sat	Specific conductance (micro-mhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent sodium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ					
						equivalents per million																				
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents		
1/8 1205	640	45	11.7 97	112	7.5 7.9	0.91 ^c	4.9 0.21			0 0.00	60 0.36				5.0 0.14			0.0				45	0	1	Maximum 2,400.	USGS
2/12 1455	5,610	46	11.3 95	65	7.2 7.4	0.60 ^c	2.6 0.11			0 0.00	34 0.56			1.0 0.02	1.2 0.03			0.0				30	2	1500	Minimum 1.3	
3/12 1435	1,310	45	11.6 96	88	7.3 7.7	0.80 ^c	3.6 0.16			0 0.00	46 0.75				3.0 0.08			0.0				40	2	2	Median 22.	
4/9 1505	2,790	49	10.7 93	73	7.3 8.7	0.74 ^c	2.0 0.09			0 0.00	38 0.62				2.4 0.15			0.0				37	6	3		
5/1 1420	1,500	54	10.0 93	80	7.7 8.0	0.25 0.76 ^c	2.6 0.11	0.5 0.01		0 0.00	44 0.72			2.0 0.04	2.8 0.08	0.1 0.00	0.1 0.01	0.0	16		PO ₄ 0.00	38	2	2		
6/11 0940	922	57	10.3 93	82	7.7 8.0	0.76 ^c	3.0 0.13			0 0.00	47 0.77				1.5 0.04			0.0				39	7	2		
7/5 0900	320	67	1.3 100	124	7.7 7.9	0.37 ^c	7.5 0.33			0 0.00	67 1.10				6.8 0.19			0.0				48	0	2		
8/13 1150	254	70	1.5 100	144	8.2 8.2	1.04 ^c	10 0.44			0 0.00	78 1.28				6.5 0.18			0.1				52	11	2		
7/12 1100	185	65	10.5 111	153	8.1 8.1	0.46 0.62	12 0.52	1.2 0.03		0 0.00	80 1.31			1.4 0.03	9.0 0.25	0.0 0.00	0.0 0.00	0.0	31		PO ₄ 0.00	54	9	3		
10/3 1035	222	58	11.0 107	152	8.2 8.0	1.07 ^c	12 0.52			0 0.00	82 1.34				10 0.28			0.0				54	0	3		
11/14 1200	690	48	11.7 101	117	7.6 7.7	1.04 ^c	5.2 0.23			0 0.00	66 1.06				4.0 0.11			0.3				52	0	2		
12/11 0910	856	44	12.2 99	108	7.3 8.1	0.93 ^c	4.2 0.18			0 0.00	62 1.02				3.2 0.09			0.1				46	0	2		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves.

f Determined by analysis of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR); as indicated.

TABLE F-1.4

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
SACRAMENTO RIVER AT FREEPORT (STA. 15b)

Date and time sampled P.S.T.	Discharge in cfs M.D.	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent silica in ppm	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ	
							equivalents per million												Boron (B)	Silica (SiO ₂)				Other constituents
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trole (NO ₃)	Fluo- ride (F)								
1962																								
1/8 0910	9210	46	10.7	90	225	7.5 7.8	1.57 ^c	17 0.74		0 0.00	95 1.56		12 0.34			0.0			1	9	Median 620. Maximum >7000. Minimum 23.	USGS		
2/7 0800	9870	48	10.4	89	217	7.1 7.6	1.49 ^c	15 0.65		0 0.00	78 1.28		11 0.31			0.1			10	10				
3/8 0745	54400	48	10.5	90	106	7.8 7.6	0.80 ^c	5.0 0.22		0 0.00	49 0.86		4.0 0.11			0.0			0	150				
4/9 0815	32800	58	9.7	95	117	7.5 8.0	0.89 ^c	6.3 0.27		0 0.00	46 0.75		8.8 0.25			0.0			7	25				
5/3 0700	19800	60	8.7	87	123	7.3 7.4	9.6 0.48	9.1 0.35	1.1 0.03	0 0.00	52 0.85	9.0 0.19	6.5 0.18	0.6 0.01	0.1 0.01	0.0	17	ABS 0.0; PO ₄ 0.15	1	10				
6/6 0645	13800	66	8.3	89	163	7.5 7.7	1.08 ^c	12 0.52		0 0.00	68 1.11	9.0 0.19	10 0.28			0.0			0	15				
7/11 0845	10200	70	8.2	92	174	7.7 7.5	1.16 ^c	14 0.61		0 0.00	76 1.25		9.8 0.28			0.1			0	15				
8/6 1425	11300	70	8.9	100	170	7.3 7.7	1.09 ^c	13 0.57		0 0.00	72 1.18		7.5 0.21			0.0			0	20				
9/5 0925	13200	68	8.0	88	219	7.3 7.5	1.5 0.75	19 0.83	1.1 0.03	0 0.00	106 1.74	13 0.27	9.5 0.27	0.2 0.00	0.0 0.00	0.1	19	As 0.00; ABS 0.1; PO ₄ 0.25	0	25				
10/3 1330	8800 eff. 68	68	8.8	96	164	7.4 7.6	1.26 ^c	11 0.48		0 0.00	83 1.36		7.2 0.20			0.1			0	10				
11/8 1445	16100	59	9.4	93	175	7.5 7.6	1.21 ^c	12 0.52		0 0.00	78 1.28		10 0.28			0.3			0	15				
12/5 1350	38700	50	10.8	95	97	7.2 7.7	0.76 ^c	4.8 0.21		0 0.00	48 0.79		3.5 0.10			0.1			0	25				

^a Field pH.^b Laboratory pH.^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), molybdenum (Mo), nickel (Ni), selenium (Se), silver (Ag), sodium (Na), strontium (Sr), vanadium (V), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 11-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
SACRAMENTO RIVER AT FREEPORT (STA. 15b)

Date and time sampled P.S.T.	Discharge in cfs AVE. MD	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million								Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by				
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)							Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)
1962																								
1/1-10	9,310				204	7.5	15 0.75	9.2 0.76	13 0.57	1.4 0.04	0 0.00	90 1.48	14 0.29	11 0.31	1.1 0.02	0.1 0.01	0.0	25	134 ^f 136 ^g	27	75	1		USGS
1/11-20	8,720				223	7.7	17 0.85	8.9 0.73	15 0.65	1.4 0.04	0 0.00	97 1.59	15 0.31	12 0.34	0.8 0.01	0.1 0.01	0.0	27	145 ^f 149 ^g	29	79	0		
1/21-31	13,300				171	7.6	13 0.65	7.1 0.58	11 0.48	1.4 0.04	0 0.00	75 1.23	11 0.23	8.0 0.23	1.2 0.02	0.1 0.01	0.0	22	112 ^f 113 ^g	27	62	0		
2/1-10	13,100				188	7.5	15 0.75	7.4 0.61	12 0.52	1.5 0.04	0 0.00	80 1.31	12 0.25	10 0.28	0.9 0.01	0.1 0.01	0.1	23	121 ^f 125 ^g	27	43	2		
2/11-20	65,800				86	7.1	7.0 0.35	3.9 0.32	3.8 0.17	1.5 0.04	0 0.00	36 0.59	6.0 0.12	3.8 0.11	1.0 0.02	0.1 0.01	0.1	14	59 ^f 63 ^g	19	34	4		
2/21-28	51,900				131	7.3	11 0.55	5.5 0.45	7.0 0.30	1.4 0.04	0 0.00	56 0.92	8.0 0.17	5.2 0.17	1.0 0.02	0.2 0.01	0.1	19	87 ^f 93 ^g	22	50	4		
3/1-10	45,100				127	7.5	10 0.50	5.6 0.46	7.0 0.30	1.3 0.03	0 0.00	59 0.97	7.0 0.15	5.0 0.14	1.0 0.01	0.2 0.01	0.1	18	84 ^f 83 ^g	23	48	0		
3/11-20	42,200				141	7.5	12 0.60	5.8 0.48	7.9 0.34	1.1 0.03	0 0.00	64 1.05	9.0 0.19	5.2 0.15	0.4 0.01	0.2 0.01	0.1	18	92 ^f 88 ^g	23	54	2		
3/21-31	27,200				157	7.6	12 0.60	6.8 0.56	9.6 0.42	1.2 0.03	0 0.00	70 1.15	11 0.23	7.0 0.20	0.6 0.01	0.1 0.01	0.0	19	101 ^f 97 ^g	26	58	1		
4/1-10	30,400				131	7.8	14 0.70	3.9 0.32	7.3 0.32	0.9 0.02	0 0.00	62 1.02	9.0 0.19	5.8 0.16	0.9 0.01	0.1 0.01	0.1	19	92 ^f 99 ^g	24	51	0		
4/11-20	30,600				101	7.4	11 0.55	2.8 0.23	5.2 0.23	0.8 0.02	0 0.00	48 0.79	5.0 0.10	4.8 0.14	0.9 0.01	0.1 0.01	0.0	18	73 ^f 79 ^g	22	39	0		
4/21-30	23,700				100	7.5	10 0.50	2.9 0.24	5.6 0.24	1.0 0.03	0 0.00	46 0.75	5.0 0.10	5.2 0.15	0.9 0.01	0.1 0.01	0.0	17	71 ^f 76 ^g	24	37	0		
5/1-10	22,000				124	7.6	10 0.50	4.7 0.39	8.4 0.37	0.8 0.02	0 0.00	53 0.87	9.0 0.19	6.3 0.18	1.1 0.02	0.0 0.00	0.0	19	85 ^f 87 ^g	29	41	2		
5/11-15	22,300				136	7.8	11 0.55	4.6 0.38	9.3 0.40	0.8 0.02	0 0.00	60 0.93	9.0 0.19	6.0 0.17	3.0 0.05	0.1 0.01	0.0	18	92 ^f 94 ^g	30	46	0		
5/16-20	19,400				163	7.5	12 0.60	6.3 0.52	12 0.52	1.0 0.03	0 0.00	70 1.15	13 0.27	8.2 0.23	2.8 0.05	0.1 0.01	0.1	19	109 ^f 109 ^g	31	56	0		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
SACRAMENTO RIVER AT FREEPORT (STA. 15b)
(continued)

Date and time sampled P.S.T.	Discharge in cfs Avg. ND	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by			
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents
1962																									
5/21-31	16,700				175	7.6	13 0.65	6.4 0.53	13 0.57	1.1 0.03	0 0.00	76 1.25	12 0.25	9.2 0.26	1.1 0.02	0.1 0.01	0.0	19	Fe 0.03	112 ^f 112 ^g	32	59	0		USGS
6/1-10	14,600				173	7.3	14 0.70	6.1 0.50	13 0.57	1.1 0.03	0 0.00	76 1.25	11 0.23	10 0.28	1.1 0.02	0.1 0.01	0.0	21	Fe 0.00	114 ^f 122 ^g	32	60	0		
6/11-20	13,300				158	7.2	12 0.60	5.8 0.48	11 0.48	1.1 0.03	0 0.00	68 1.11	9.0 0.19	9.6 0.27	1.0 0.02	0.1 0.01	0.0	21	Fe 0.00	105 ^f 109 ^g	32	54	0		
6/21-30	11,100				161	7.3	14 0.70	5.1 0.42	12 0.52	0.9 0.02	0 0.00	69 1.13	9.0 0.19	10 0.28	1.0 0.02	0.1 0.01	0.0	21	Fe 0.00	107 ^f 120 ^g	31	56	0		
7/1-10	10,100				175	7.4	13 0.65	6.1 0.50	13 0.57	0.9 0.02	0 0.00	78 1.28	10 0.21	10 0.28	1.4 0.02	0.0	0.1	22	Fe 0.01	114 ^f 112 ^g	33	58	0		
7/11-20	10,300				175	7.4	13 0.65	6.0 0.49	13 0.57	0.9 0.02	0 0.00	80 1.31	10 0.21	8.8 0.25	1.0 0.02	0.0	0.1	21	Fe 0.01	113 ^f 109 ^g	33	57	0		
7/21-31	11,400				167	7.4	12 0.60	5.8 0.48	13 0.57	0.9 0.02	0 0.00	78 1.28	8.8 0.18	8.6 0.24	1.0 0.02	0.0	0.0	21	Fe 0.01	109 ^f 109 ^g	34	54	0		
8/1-10	11,000				189	7.7	15 0.75	6.2 0.51	14 0.61	1.1 0.03	0 0.00	88 1.44	7.4 0.15	10 0.28	1.2 0.02	0.0	0.1	26	Fe 0.01	124 ^f 125 ^g	32	63	0		
8/11-20	11,900				182	7.6	14 0.70	6.6 0.54	14 0.61	1.1 0.03	0 0.00	84 1.38	9.6 0.20	9.0 0.25	1.1 0.02	0.0	0.1	27	Fe 0.01	124 ^f 122 ^g	32	62	0		
8/21-31	11,700				180	7.5	14 0.70	5.8 0.48	14 0.61	1.1 0.03	0 0.00	81 1.33	10 0.21	9.8 0.28	2.7 0.04	0.1	0.0	27	Fe 0.01	125 ^f 115 ^g	34	59	0		
9/1-10	12,800				221	7.7	15 0.75	8.9 0.73	18 0.78	1.4 0.04	0 0.00	107 1.75	9.0 0.19	12 0.34	2.1 0.03	0.4 0.02	0.1	24	Fe 0.00	144 ^f 144 ^g	34	74	0		
9/11-19	12,600				234	7.9	16 0.80	8.8 0.72	18 0.78	1.2 0.03	0 0.00	113 1.85	5.2 0.11	14 0.39	2.2 0.04	0.4 0.02	0.1	22	Fe 0.00	144 ^f 151 ^g	33	76	0		
9/20-30	11,100				176	7.8	17 0.85	4.7 0.39	12 0.52	1.3 0.03	0 0.00	84 1.38	6.0 0.12	9.3 0.26	2.1 0.03	0.4 0.02	0.0	21	Fe 0.00	115 ^f 115 ^g	29	62	0		
10/1-13	11,400				165	7.2	13 0.65	6.3 0.52	11 0.48	1.3 0.03	0 0.00	78 1.28	8.4 0.17	7.8 0.22	4.0 0.06	0.3 0.02	0.0	23	Fe 0.01	113 ^f 108 ^g	29	59	0		
10/14-19	67,200				82	6.9	7.1 0.35	3.2 0.26	4.0 0.17	1.4 0.04	0 0.00	36 0.59	4.8 0.10	2.8 0.03	2.5 0.04	0.2 0.01	0.0	13	Fe 0.13	57 ^f 59 ^g	21	30	0		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{VI}), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
SACRAMENTO RIVER AT PREPORT (STA. 15b)
(continued)

Date and time sampled P.S.T.	Discharge in cfs Avg. MD	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by ⁱ		
						equivalents																	
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)
1962																							
10/20-31	28,300			145	7.1	12 0.60	5.5 0.45	8.4 0.37	1.7 0.04	0 0.00	69 1.13	7.4 0.15	5.6 0.16	2.0 0.03	0.2 0.01	0.0	22	Fe 0.06	99 ^f 1078	53	0		USGS
11/1-10	17,200			148	7.4	12 0.60	6.0 0.49	9.0 0.39	1.6 0.04	0 0.00	71 1.16	8.4 0.17	5.9 0.17	1.4 0.02	0.1 0.01	0.0	21	Fe 0.00	100 ^f 1016	55	0		
11/11-20	15,500			148	7.4	12 0.60	6.1 0.50	9.6 0.42	1.6 0.04	0 0.00	72 1.18	7.6 0.16	6.0 0.17	1.3 0.02	0.1 0.01	0.0	22	Fe 0.01	101 ^f 1008	55	0		
11/21-30	16,600			145	7.4	12 0.60	5.6 0.46	9.0 0.39	1.7 0.04	0 0.00	71 1.16	7.0 0.15	5.9 0.17	1.4 0.02	0.1 0.01	0.0	21	Fe 0.02	99 ^f 1008	53	0		
12/1-3	20,300			140	7.1	13 0.65	4.9 0.40	8.7 0.38	1.2 0.03	0 0.00	65 1.07	8.0 0.17	6.4 0.18	1.8 0.03	0.2 0.01	0.1	20		96 ^f	53	0		
12/4-10	30,900			113	7.3	11 0.55	4.4 0.36	6.0 0.26	0.9 0.02	0 0.00	57 0.93	5.8 0.12	5.6 0.16	1.9 0.03	0.2 0.01	0.0	20	Fe 0.00	84 ^f 858	45	0		
12/11-16	21,300			137	7.5	12 0.60	5.8 0.48	8.3 0.36	1.0 0.03	0 0.00	68 1.11	7.0 0.15	6.8 0.19	1.6 0.03	0.2 0.01	0.0	23	Fe 0.00	99 ^f 1028	54	0		
12/17-21	47,500			106	7.3	9.7 0.48	3.6 0.30	5.2 0.23	1.4 0.04	0 0.00	50 0.82	5.4 0.11	4.2 0.12	2.1 0.03	0.0 0.00	0.1	19	Fe 0.19 (unfiltered)	76 ^f	39	0		
12/22-31	34,500			134	7.3	12 0.60	4.9 0.40	7.8 0.34	1.6 0.04	0 0.00	66 1.08	6.8 0.14	5.0 0.14	1.9 0.03	0.1 0.01	0.1	21	Fe 0.02	94 ^f 958	50	0		

^a Field pH.^b Laboratory pH^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00^e Derived from conductivity vs TDS curves.^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER NEAR HAMILTON CITY (STA. 13)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dissolved solids in ppm	Permeability	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by ^h
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)	Other constituents			
1/26/62				a/b																
1/11/50	4,180	50	159	7.5	121		9.3		0	77		5.3			0.0					USGS
2/14/63	57,000	50	83	7.2	0.65		4.1		0	34	2.0	1.5			0.0					
3/15/65	10,830	50	152	7.5	1.16		7.2		0	72	1.18	4.6			0.0					
4/12/62	6,312	63	136	7.3	1.08		7.2		0	68	1.11	5.8			0.1					
5/14/63	7,440	58	126	7.3	1.1	5.0	6.6	1.2	0	62	8.0	0.8	0.6		0.0		PO ₄ 0.00 As 0.00 ABS 0.0			
6/13/62	7,980	60	121	7.5	0.98	0.41	6.6	0.03	0	64	1.05	2.8	0.01		0.0					
7/18/63	8,183	59	118	7.5	0.98		6.4		0	62	1.02	4.2			0.0					
8/21/60	8,389	58	116	7.3	0.90		7.0		0	64	1.05	2.5			0.0					
9/20/61	6,096	60	116	7.5	1.0	4.6	6.3	0.8	0	64	1.05	2.9	0.6		0.0		PO ₄ 0.05 As 0.00 ABS 0.0			
10/18/60	9,357	56	129	7.3	1.02	0.36	7.6	0.02	0	64	1.05	5.0	0.01		0.0					
11/28/60	11,670	52	136	7.3	1.02		7.2		0	62	1.02	6.8			0.2					
12/19/60	23,440	52	114	7.3	0.87		6.1		0	58	0.95	3.2			0.0					

^a Field pH.

^b Laboratory pH.

^c Sum of calcium and magnesium in ppm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves.

^f Determined by addition of analyzed constituents.

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT KESWICK (STA. 12)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ in ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ¹	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)
1/11 0945	3,200	48	8.5	73	134	7.1 7.9	1.04 ^c	7.2 0.31		0 0.00	60 1.13		4.0 0.11			0.1			52	0	7	Maximum 62.	USGS
2/12 1600	3,240	48	10.7	92	143	6.8 6.6	1.16 ^c	6.8 0.30		0 0.00	33 0.54	31 0.65	2.4 0.07			0.0			58	31	40	Minimum 0.022	
3/12 1550	7,000	47	11.1	94	126	7.0 7.2	0.95 ^c	6.6 0.29		0 0.00	56 0.92		2.8 0.06			0.1			48	2	15	Median 0.62	
4/9 1600	3,190	49	11.1	97	122	7.0 7.9	0.92 ^c	6.2 0.30		0 0.00	60 0.93		3.2 0.11			0.3			46	0	7		
5/1 1605	7,660	48	10.8	93	117	7.2 7.5	1.1 0.55	6.3 0.27	1.3 0.03	0 0.00	38 0.95	7.0 0.15	3.2 0.11	0.3 0.00	0.1 0.01	0.0	24	PO ₄ 0.05 As 0.00 ABS 0.0	46	0	9		
6/7 1330	8,790	48	10.6	91	113	7.2 7.4	0.88 ^c	6.0 0.26		0 0.00	58 0.95		1.8 0.05			0.0			44	0	8		
7/12 1510	10,500	48	10.6	91	110	7.2 7.6	0.87 ^c	6.4 0.28		0 0.00	58 0.95	5.0 0.10	2.5 0.07			0.0			43	0	3		
8/10 1445	11,000	49	7.7	67	109	7.0 7.7	0.86 ^c	6.4 0.28		0 0.00	59 0.97	5 0.10	2.0 0.06			0.0			43	0	4		
9/8 1445	7,790	51	9.9	88	105	7.2 6.0	1.0 0.50	5.5 0.24	0.8 0.02	0 0.00	58 0.95	4.2 0.09	2.0 0.06	0.2 0.00	0.0 0.00	0.0	22	PO ₄ 0.10 As 0.00 ABS 0.0	42	0	10		
10/2 0730	6,100	52	10.7	97	105	7.1 7.5	0.84 ^c	5.2 0.26		0 0.00	59 0.97	4.0 0.08	4.2 0.12			0.0			42	0	1		
11/2 0915	6,090	54	9.5	88	112	7.0 7.2	0.83 ^c	5.8 0.25		0 0.00	62 1.02	3.0 0.06	2.0 0.06			0.2			44	0	20		
12/10 1330	8,090	53	8.3	76	123	7.1 6.1	0.90 ^c	7.6 0.33		0 0.00	66 1.03	5.0 0.10	2.6 0.07			0.1			45	0	20		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 8-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
SACRAMENTO RIVER AT RIO VISTA (STA. 16)

Date and time sampled P.S.T.	Discharge in cfs	Temp. in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	Total N.C. ppm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
1962	Tidal																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT SNODGRASS SLOUGH (STA. 97)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in equivalents per million								Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by i
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)			
1962	Tidal																			USBR
1/18		46		226	7.1	18	8.0	16	1.2	0.0	89	15	15	0.6						
1/40																				
2/12		50		107	7.1	8.6	5.6	5.5	1.2	0.0	38	7.7	8.5	0.0						
1200																				
3/12		50		131	7.1	11	5.7	6.0	0.8	0.0	52	11	7.8	0.6						
1245																				
4/16		59		114	7.1	11	4.4	5.1	0.39	0.0	47	14	7.1	0.0						
1330																				
5/14		62		139	7.2	9.4	6.0	9.7	1.6	0.0	51	7.7	7.1	0.6						
1320																				
6/28		72		181	7.4	14	7	13	1.2	0.0	73	14	15	0.62						
1505																				
7/16		72		165	7.6	14	6	12	1.2	0.0	68	14	9	0.62						
1315																				
8/13		77		172	7.7	14	8.1	14	0.8	0.0	77	12	8.5	0.0						
1210																				
9/20		71		181	6.9	17	6.1	12	1.6	0.0	88	8.2	11	0.0						
1405																				
10/15		64		62	6.6	6.2	2.8	3.0	1.2	0.0	26	8.2	4.3	1.2						
1315																				
11/13		60		171	8.0	17	7	10	0.78	0.0	83	6.7	9	0.6						
1220																				
12/26		47		123	7.5	10	5.0	6.9	1.2	0.0	57	8.2	6.4	0.0						
1120																				

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as $\frac{0.0}{0.00}$ except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by: United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT TOLAND LANDING (STA. 15a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in equivalents per million										Total dissolved in ppm	Percent iodine in ppm	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ
			ppm	% Sat		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)				
1962	Tidal																				USBR
2/15 1200		50																			
3/13 1130		52			178																
4/16 1130					122																
5/14 1100		68			141																
6/18 1040		70			172																
7/16 1440		71			267																
8/21 1450		77			328																
9/20 1230		70			324																
10/15 1110		64			123																

^a Field pH.

^b Laboratory pH.

^c Sum of calcium and magnesium in ppm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as $\frac{0.0}{0.00}$ except as shown.

^e Derived from conductivity vs TDS curves.

^f Determined by addition of analyzed constituents.

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (No. 5)

SACRAMENTO SLOUGH NEAR KNIGHTS LANDING (STA. 14a)

SACRAMENTO SLOUGH NEAR KATHLEEN BRIDGE (1962-1967)																									
Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen	Specific conductance (micro-mhos at 25°C)	pH	Mineral constituents in										parts per million				Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by ⁱ
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)	Other constituents							
			ppm	% Sat	a/b																				
1/12 1962	661	47	10.0	85	150	7.7 8.3	3.58 ^c		30	236 3.87	3 0.10		24 0.68				0.0			Tot. Alk. 242					
2/15 1962	FLOODED	53	9.9	91	203	7.4 7.5	1.40 ^c		16	74 1.21	0 0.00		18 0.51				0.0								
3/9 1962	FLOODED	53	10.0	92	312	7.5 7.9	2.12 ^c		25	134 2.20	0 0.00		25 0.71				0.0								
4/6 1962	578	69	9.4	103	314	7.4 7.9	2.60 ^c		18	172 2.82	0 0.00		13 0.37				0.0								
5/7 1962	652	74	7.2	84	366	7.7 8.1	1.30	1.8	25 1.09	1.6 0.04	0 0.00		22 0.62	0.4 0.01	0.0 0.00	0.0	28		PO ₄ 0.35	223 ^f					
6/18 1962	810	77	6.7	80	397	7.9 8.1	3.28 ^c		30	213 3.49	0 0.00		21 0.59				0.0								
7/17 1962	954	80	6.3	78	401	7.9 8.1	3.10 ^c		30	222 3.64	0 0.00		18 0.51				0.0								
8/20 1962	963	78	6.8	82	425	7.6 8.0	3.30 ^c		34	248 4.05	0 0.00		18 0.51				0.0								
9/19 1962	720	71	7.4	83	377	7.7 7.8	1.40	1.58	25 1.09	2.0 0.05	0 0.00		12 0.34	0.8 0.01	0.1 0.01	0.1	28		PO ₄ 0.35	232 ^f 256 ^g					
10/17 1962	FLOODED	57	8.1	78	101	7.0 7.2	0.74 ^c		2.6 0.42		0 0.00		4.8 0.14				0.1								
11/27 1962	NOT SAMPLED																								
12/18 1962	FLOODED - NOT SAMPLED																								

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁺⁶), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 9-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SALT SLOUGH AT SAN JUAN RANCH (STA. NO. 24c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmhos at 25°C)	pH ^b	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
SAN JOAQUIN RIVER AT ANTIOCH (STA. 28)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen	Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by					
						Mineral constituents in equivalents per million																				
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Barium (Ba)	Silica (SiO ₂)	Other constituents		
1962	Tidal																									
1/11 1355		48	9.0	77	1,050	7.3 7.7	3.15 ^c	138 6.00		0 0.00	82 1.34		250 7.05				0.1			578 ^e	66	158	91	30	Median 230. Maximum >7000. Minimum 23.	USGS
2/15 0920		52	9.2	83	336	7.1 7.6	2.04 ^c	26 1.13		0 0.00	75 1.23		20 0.56				0.1			185 ^e	36	102	40	45		
3/8 1015		52	9.5	86	379	7.1 7.7	2.12 ^c	34 1.48		0 0.00	70 1.15		44 1.24				0.1			208 ^e	41	106	49	35		
4/11 0950		66	8.4	90	241	7.3 7.6	1.62 ^c	20 0.87		0 0.00	71 1.16		26 0.73				0.1			133 ^e	35	81	23	40		
5/8 0930		68	8.5	93	208	7.8 7.6	0.55	21 0.91	1.6 0.04	0 0.00	52 0.85	14 0.29	29 0.82	0.2 0.00	0.3 0.02	0.0	1.5	PO ₄ 0.00	124 ^f	46	52	9	25			
6/6 0830		68	8.2	90	360	8.2 7.5	1.50 ^c	46 2.00		0 0.00	68 1.11		60 1.69				0.0			198 ^e	57	75	19	25		
7/10 1500		73	8.5	98	1,050	7.7 7.4	2.84 ^c	162 7.05		0 0.00	76 1.25		253 7.14				0.1			578 ^e	71	142	80	15		
8/2 1135		72	7.8	89	2,570	7.5 7.6	5.71 ^c	440 19.14		0 0.00	83 1.36		690 19.46				0.2			1414 ^e	77	285	217	45		
9/5 1350		73	7.5	98	1,920	7.5 7.6	2.9 1.45	38 3.11	10 0.26	0 0.00	90 1.48	79 1.64	512 14.44	2.9 0.05	0.1 0.01	0.1	1.2	PO ₄ 0.15	1030 ^f 1050 ^g	73	228	154	60			
10/3 1110		69	7.0	78	971	7.4 7.6	2.80 ^c	146 6.35		0 0.00	102 1.67		222 6.26				0.1			534 ^e	69	140	56	45		
11/13 1010		62	7.2	74	304	7.2 7.9	1.56 ^c	31 1.35		0 0.00	81 1.33		42 1.18				0.0			167 ^e	46	78	12	25		
12/10 1010		53	8.9	82	225	7.3 7.6	1.30 ^c	18 0.78		0 0.00	77 1.26		24 0.68				0.0			124 ^e	38	65	2	15		

^a Field pH.

^b Laboratory pH.

^c Sum of calcium and magnesium in ppm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown, 0.00

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents.

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE R-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER AT BRANDT BRIDGE (STA. 101a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million equivalents per million								Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ ppm		Turbidity in ppm	Coliform MPN/ml	Analyzed by 1			
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)			Nitrate (NO ₃)	Fluoride (F)				Boron (B)	Silica (SiO ₂)	Other constituents
1960 2/13 1000	Tidal	54			532			59						78							364	48		USBR
5/15 1415		74			275			27						36							172	43		
9/28 1435		71			644			68						111							380	46		
11/14 1405		62			716			73						124							476	44		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER AT CROWS LANDING BRIDGE (STA. NO. 26b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ ppm	Tur- bidity in ppm	Coliform ^b MPN/ml	Analyzed by ¹			
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	equivalents per million								Other constituents		
															Ni- trate (NO ₃)	Fluo- ride (F)								Boron (B)	Silico (SiO ₂)
1962																			USGS						
1/18 1100	---	45	10.9	90	1,630	7.7	63 3.14 ^c	44 3.58	224 9.74	244 4.00	239 4.98	0.0 0.00	244 4.00	239 4.98	259 7.31	4.5 0.07	0.5 0.03	1.1	15				20	Median 62. Maximum 7000. Minimum 6.2	
2/8 1145	---	52	9.1	82	1,820	7.9	7.17 ^c		248 10.79	216 3.54	296 8.35	0.0 0.00	216 3.54	296 8.35	296 8.35			1.3					30		
3/1 1120	---	48	10.7	93	715	7.6	2.90 ^a		91 3.96	116 1.90	100 2.82	0.0 0.00	116 1.90	100 2.82	100 2.82			0.5					35		
4/5 1300	---	67	9.9	107	1,190	7.7	4.84 ^c		156 6.29	146 2.39	181 3.77	0.0 0.00	146 2.39	181 3.77	205 5.18			0.9					60		
5/1 1050	---	64	10.3	108	1,470	7.8	60 2.99	36 2.97	200 8.70	161 2.64	124 4.04	0.0 0.00	161 2.64	124 4.04	272 7.67	3.2 0.05	0.2 0.01	0.5	19	PO ₄ 0.40			30		
6/5 1240	---	65	9.4	99	123	7.1	0.58 ^e		12 0.52	28 0.46	23 0.65	0.0 0.00	28 0.46	23 0.65	23 0.65			0.0					25		
7/3 1000	---	74	8.2	95	928	7.7	3.88 ^e		124 5.39	128 2.10	155 4.37	0.0 0.00	128 2.10	155 4.37	155 4.37			0.4					9		
8/9 1000	---	76	8.4	100	925	7.7	4.08 ^e		124 5.39	172 2.82	151 4.26	0.0 0.00	172 2.82	151 4.26	151 4.26			0.3					15		
9/6 1000	---	73	8.2	94	810	7.8	37 1.85	19 1.55	109 4.74	159 2.61	80 1.67	0.0 0.00	159 2.61	80 1.67	133 3.75	3.2 0.05	0.2 0.01	0.2	22	PO ₄ 0.50			20		
10/4 1100	---	68	9.2	100	836	7.9	3.18 ^c		108 4.70	163 2.67	136 3.84	0.0 0.00	163 2.67	136 3.84	136 3.84			0.2					15		
11/8 1115	---	60	9.1	91	1,210	8.2	5.00 ^e		166 7.22	222 3.64	196 5.53	0.0 0.00	222 3.64	196 5.53	196 5.53			0.4					10		
12/6 1135	---	55	9.8	91	1,540	8.2	6.12 ^c		202 8.79	206 3.38	255 7.19	0.0 0.00	206 3.38	255 7.19	255 7.19			0.7					10		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 9-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER AT CROWS LANDING BRIDGE (STA. 266)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃	Turbidity in ppm	Coliform MPN/ml	Analyzed by
			ppm	% Sat		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)				
1962																					
1/15 1220		44						198					248								56
2/14 1310		52						39					43								46
3/14 1315		54						72					89								47
4/17 1250		70						169					224								55
5/15 1215		64						54					77								47
6/14 1200		64						17					30								38
7/16 1305		79						21					130								50
8/15 1255		79						98					138								49
9/17 1100		73						98					142								50
10/16 1210		60						123					182								54
11/15 1225		59						161					219								54
12/13 1200		53						--					243								--

a. Field pH

b. Laboratory pH

c. Sum of calcium and magnesium in egm.

d. Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e. Derived from conductivity vs TDS curves

f. Determined by addition of analyzed constituents.

g. Gravimetric determination

h. Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i. Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER NEAR DOS PALOS (STA. 25a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Conform- ity MPN/ml	Analyzed by
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Corban- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- troge (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)	Other constituents			
1962																					
1/15 1510		45			760	40	21	80	3.1	5.1	126	81	127	0.6					474	48	
2/14 1610		52			972	53	22	109	3.9	0.0	145	136	143	2.5					596	51	
3/15 0830		54			1,065	47	31	120	3.1	0.0	149	147	173	0.6					662	51	
4/16 1555		70			656	32	19	70	2.0	0.0	91	99	98	1.9					424	49	
5/15 1500		65			400	20	11	37	1.2	0.0	63	52	53	0.62					254	45	
6/14 1515		64			317	16	2.0	31	2.0	0.0	64	36	42	0.6					194	46	
7/16 1600		82			275	17	8.5	26	1.6	0.0	72	41	31	0.6					192	41	
8/15 1530		80			493	28	13	44	2.0	0.0	77	34	84	0.6					363	43	
9/17 1325		74			439	22	12	47	2.3	0.0	90	40	65	0.0					270	49	
10/16 1410		60			656	30	21	75	2.3	0.0	129	60	109	0.6					428	50	
11/15 1500		59			756	38	20	87	2.3	0.0	127	81	138	0.6					488	51	
12/13 1430		53			823	39	19	87	2.7	0.0	122	86	133	1.2					482	52	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in gpm;

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE (STA. NO. 25c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhms/cm at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sed- iment	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potass- ium (K)	Carbon- dioxide (CO ₂)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluor- ide (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as $\frac{0.0}{0.00}$ except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE R-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER AT FRIANT DAM (STA. NO. 24)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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o Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
SAN JOAQUIN RIVER AT OAKWOOD BRIDGE (STA. 101)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)						
1962	Tidal																					
1/11 1330		46	8.0	67	1270	7.6 8.0	5.72 ^c	151 6.57		0 0.00	190 3.11		237 6.69		0.4		719 ^e	53	286	130	13	Median 1300
2/15 1600		54	7.2	67	211	6.9 7.2	1.33 ^c	18 0.78		0 0.00	61 1.00		19 0.54		0.3		119 ^e	37	67	17	95	Maximum 97000. Minimum 62.
3/8 1230		54	9.2	85	460	7.2 7.3	2.00 ^c	58 2.52		0 0.00	90 1.48		54 1.52		0.3		260 ^e	56	100	26	35	
4/4 1215		64	9.6	101	506	7.6 7.8	2.41 ^c	56 2.44		0 0.00	92 1.51		77 2.17		0.2		286 ^e	50	121	46	20	
5/7 1130		73	12.0	139	488	7.6 8.1	2.8 1.40	50 2.18	3.8 0.10	0 0.00	112 1.84	32 0.67	79 2.23	0.3 0.00	0.2 0.01	0.0	275 ^f	44	131	39	20	
6/5 1115		67	9.6	104	222	7.2 7.0	1.06 ^c	22 0.96		0 0.00	55 0.90		30 0.85		0.0		126 ^e	48	53	8	30	
7/9 1415		79	6.0	74	531	7.4 7.4	2.42 ^c	63 2.74		0 0.00	115 1.88		90 2.54		0.1		301 ^e	53	121	27	20	
8/2 0830		72	4.0	46	514	7.2 7.7	2.35 ^c	60 2.61		0 0.00	107 1.75		86 2.43		0.1		291 ^e	53	117	29	10	
9/5 1305		76	5.4	64	678	7.9 7.9	35 1.75	83 3.61	6.8 0.17	0 0.00	204 3.34	22 0.46	106 2.99	2.9 0.05	0.2 0.01	0.0	381 ^f 375 ^g	53	149	0	30	
10/2 1200		72	8.2	94	806	7.9 7.6	3.58 ^c	99 4.31		0 0.00	194 3.18		131 3.70		0.1		456 ^e	55	179	20	4	
11/4 1415		61	8.7	88	725	7.5 7.7	3.20 ^c	84 3.65		0 0.00	141 2.31		118 3.33		0.1		410 ^e	53	160	44	10	
12/5 0955		54	8.2	76	505	7.3 7.8	2.20 ^c	55 2.39		0 0.00	93 1.52		79 2.23		0.2		286 ^e	52	110	34	4	

^a Field pH.

^b Laboratory pH.

^c Sum of calcium and magnesium in ppm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents.

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER NEAR GRAYSON (STA. NO. 26)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in equivalents per million								Total dis- solved solids in ppm	Per- cent sed- iment in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)							Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER AT HILLS FERRY BRIDGE (STA. NO. 25b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent calcium	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by
			ppm	% Sat			equivalents					per million											
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Barium (Ba)	Silica (SiO ₂)			
1962																					USGS		
1/11 1435	460	48	12.0	103	1,300	8.1	5.44 ^c		172 7.48		0.0 0.00	219 3.59	165 3.44	198 5.59			0.8		58	272	92	20	Median 190. Maximum 7000. Minimum 6.2
2/8 1110	350	52	9.4	86	1,500	7.5	6.02 ^c		200 8.70		0.0 0.00	195 3.20	232 4.83	233 6.57			1.0		59	301	141	30	
3/1 1100	2,810	59	10.4	90	1,180	8.0	4.78 ^c		158 6.87		0.0 0.00	173 2.84	182 3.79	165 4.65			1.2		59	239	97	35	
4/5 1150	770	67	10.2	111	1,910	7.8	7.71 ^c		264 11.48		0.0 0.00	182 2.98	322 6.70	351 9.90			1.6		60	385	36	90	
5/1 1200	397	64	10.4	108	1,160	8.1	4.8 2.40	28 2.34	149 6.48	3.0 0.08	0.0 0.00	138 2.26	150 3.12	194 5.47	2.5 0.04	0.2 0.01	0.2	PO ₄ 0.35	57	237	124	20	
6/5 1130	2,040	71	9.8	111	322	7.6	1.36 ^c		40 1.74		0.0 0.00	49 0.86	31 0.65	52 1.47			0.0		56	68	28	15	
7/3 1030	550	74	8.0	93	762	7.7	3.11 ^c		99 4.31		0.0 0.00	112 1.84	81 1.69	124 3.50			0.1		58	155	63	20	
8/9 0850	379	75	7.0	83	917	7.8	4.04 ^c		120 5.02		0.0 0.00	166 2.72	98 2.04	150 4.23			0.3		56	202	66	30	
9/7 1300	308	76	9.6	113	982	8.1	4.5 2.25	23 1.87	127 5.52	3.2 0.08	0.0 0.00	166 2.72	103 2.14	162 4.57	3.6 0.06	0.2 0.01	0.2	PO ₄ 0.40	57	206	70	10	
10/4 1230	315	69	9.8	108	849	8.1	3.59 ^c		114 4.56		0.0 0.00	148 2.43	85 1.77	143 4.03			0.2		58	180	59	20	
11/8 1245	260	61	8.5	86	1,340	8.0	5.52 ^c		184 8.00		0.0 0.00	223 3.65	148 3.08	226 6.38			0.5		59	276	93	25	
12/6 1215	220	54	9.4	103	1,610	7.9	6.28 ^c		206 8.96		0.0 0.00	204 3.34	196 4.08	274 7.73			0.6		59	314	147	15	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER AT JERSEY POINT (STA. 28b)

SAN JOAQUIN RIVER AT JENSEN POINT (SIA-200)																						
Date and time sampled P.S.T.	Discharge in cfs in P.S.T.	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million								Total dissolved solids in ppm	Percent calcium	Hardness as CaCO ₃ ppm		Turbidity in ppm	Coliform MPN/ml	Analyzed by	
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)			Nitrate (NO ₃)	Fluoride (F)				Boron (B)
1962	Tidal																				USBR	
2/15 1015		52			422															272		
3/12 1200		51			318															208		
4/17 1240					175															136		
5/15 1400		66			154															108		
6/19 1220		72			189															126		
7/17 1130		72			317															216		
8/14 0905		72			504															420		
9/17 1225		70			457															236		
10/17 1030		61			203															156		

o Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DMR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER AT MAZE ROAD BRIDGE (STA. NO. 26a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by ¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)								Boron (B)	Silica (SiO ₂)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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^a Field pH

^b Laboratory pH

^c Sum of calcium and magnesium in ppm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves.

^f Determined by addition of analyzed constituents.

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

CENTRAL VALLEY REGION (NO. 5)

SSAN JOAQUIN RIVER NEAR MENDOTA (STA. NO. 25)

Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Long Beach, Department of Public Health (LADPH); City of Los Angeles, Department of Public Health (LADPH); or California Department of Water Resources (DWR), as indicated.

TABLE B-214

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER ABOVE MERCED RIVER (STA. 30a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in equivalents per million								Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ
			ppm	% Sat		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)			
1962																				
1/15 1230	44			1,896	7.9	73	52	276	5.9	0.0	269	288	320	3.7						
3/14 1330	54			1,218	8.0	48	34	146	3.1	0.0	151	217	182	2.5						
4/16 1325	70			2,403	7.2	94	64	331	4.3	0.0	195	404	433	3.1						
5/15 1230	64			1,694	7.7	71	42	192	4.3	0.0	171	228	315	1.86						
6/14 1240	64			306	7.4	14	6.8	32	1.6	0.0	38	30	52	1.6						
7/16 1320	79			1,352	7.4	60	34	153	4.3	0.0	175	167	237	4.3						
8/15 1315	79			1,424	7.7	57	40	164	3.5	0.0	185	174	240	1.2						
9/17 1120	73			1,507	7.6	63	38	177	4.7	0.0	200	168	264	1.9						
10/16 1230	60			2,889	7.0	107	86	423	3.9	0.0	224	447	657	1.9						
11/15 1230	59			1,500	8.0	54	50	203	4.7	0.0	232	209	293	2.5						
12/13 1215	53			2,091	7.9	73	50	258	3.1	0.0	194	256	401	2.5						

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
SAN JOAQUIN RIVER AT MOSSDALE BRIDGE (STA. 102)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sed- iment	Hardness as CaCO ₃ Total in C. ppm	Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ		
			ppm	%Sat		equivalents																	
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)
1962	Tidal																						
1/10 1115		48	9.7	83	1270	7.5 7.8	5.72 ^c	151 6.57	0 0.00	191 3.13		227 6.40			0.4		719 ^e	53	286	129	10	Median 230. Maximum 7000. Minimum 5.	USGS
2/13 1200		52	6.7	61	356	8.1 7.2	1.63 ^e	38 1.65	0 0.00	80 1.31		41 1.16			0.3		201 ^e	50	82	16	75		
3/7 1110		54	8.9	83	516	7.3 7.6	2.32 ^c	60 2.61	0 0.00	96 1.57		64 1.81			0.4		292 ^e	53	116	37	35		
4/9 1305		67	10.9	118	724	7.6 7.4	3.36 ^c	86 3.74	0 0.00	119 1.95		118 3.33			0.4		410 ^e	53	168	70	15		
5/7 1000		73	11.4	132	357	7.5 7.9	2.1 1.05	35 1.52	2.4 0.06	75 1.23	23 0.88	56 1.58	0.1 0.00	0.1 0.01	0.0	15	198 ^f	46	87	25	15		
6/5 0850		64	9.3	97	230	7.7 7.4	1.04 ^c	25 1.09	0 0.00	51 0.84		31 0.87			0.0		130 ^e	51	52	10	30		
7/10 0845		75	11.2	132	979	7.7 7.6	4.49 ^c	116 5.05	0 0.00	166 2.72		185 5.22			0.3		554 ^e	53	224	88	30		
8/8 1230		77	14.3	172	997	7.7 7.6	4.62 ^c	122 5.31	0 0.00	181 2.97		178 5.02			0.2		564 ^e	53	231	83	15		
9/6 1035		74	10.8	126	904	7.9 8.0	2.50	108 4.70	3.8 0.10	174 2.85	65 1.35	160 4.51	1.3 0.06	0.1 0.01	0.2	24	518 ^f 5228	52	208	65	15		
10/8 1235		67	8.9	96	765	7.5 7.5	3.60 ^c	89 3.87	0 0.00	166 2.72		122 3.44			0.1		433 ^e	52	180	44	9		
11/14 1330		60	8.3	83	720	7.3 7.8	3.19 ^c	89 3.87	0 0.00	132 2.16		122 3.44			0.1		408 ^e	55	159	51	8		
12/10 1425		52	8.8	80	462	7.3 7.7	2.00 ^c	48 2.09	0 0.00	81 1.33		73 2.06			0.1		261 ^e	51	100	34	5		

a Field pH.

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER AT PATTERSON BRIDGE (STA. NO. 27a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent suspended in ppm	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER AT PATTERSON WATER COMPANY (STA. 27a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micramhos at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ¹
					Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)				
1/6/62					64	40	181	5.5	0.0	233	219	248	3.1				968	54		USER
1/15 1200	44			1,508	7.8															
2/14 1245	52			392	6.9												286	50		
3/14 1245	54			641	7.9												464	52		
4/16 1230	70			1,338	7.2												856	54		
5/15 1145	64			415	7.5												248	51		
6/14 1130	64			218	7.5												132	50		
7/16 1230	78			897	8.0												576	53		
8/15 1230	79			963	7.4												612	51		
9/17 1040	73			1,030	7.0												622	56		
10/16 1150	60			738	7.0												492	56		
11/15 1155	59			1,289	7.4												916	55		
12/13 1145	53			1,681	7.7												1,010	57		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.
0.00

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER ABOVE BIFURCATION WITH SALT SLOUGH (STA. 111b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance at 25°C µmhos/cm	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Par- cent sulfate in ppm	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Conform MPN/ml	Analyzed by i
					Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- dioxide (CO ₂)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)	Other constituents			
1962																				
1/15		45		971	51	27	104	3.9	0.0	170	92	175	0.6							48
1/35																				
2/15		52		153	16	3.4	11	2.7	0.0	59	15	6.4	2.5							29
1/405																				
3/14		54		259	20	8.3	20	2.0	0.0	85	19	28	0.6							33
1/450																				
4/16		70		973	55	21	106	2.7	0.0	168	93	165	0.6							50
1/410																				
5/15		64		1,070	58	23	115	5.1	0.0	192	89	188	0.62							50
1325																				
6/14		64		990	52	22	104	5.1	0.0	201	78	162	1.9							48
1330																				
7/16		80		762	45	19	80	3.9	0.0	179	59	121	0.6							47
1/405																				
8/16		80		885	47	20	91	2.7	0.0	184	69	143	1.9							49
1/410																				
9/17		73		860	48	20	92	4.7	0.0	199	61	136	1.9							49
1230																				
10/16		60		1,230	62	27	157	3.9	0.0	246	89	244	0.6							56
1330																				
11/15		59		1,032	44	19	155	3.5	0.0	281	57	192	0.6							64
1320																				
12/13		53		1,660	59	22	246	3.1	17	309	90	311	1.9							69
1300																				

o Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER AT SAN ANDREAS LAUNDRY (STA. 1126)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in equivalents per million								Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)	Other constituents	
1962	11da1					22	10	22	1.2	0.0	85	26	26	2.5					
1/18 1045		46		286	7.3	22	6.7	8.1	1.2	0.0	44	20	12	0.6					
2/12 1250		50		143	7.1	10	5.9	6.9	0.8	0.0	56	13	7.1	0.6					
3/12 1340		51		141	7.2	12	6.3	9.2	0.78	0.0	48	15	9.9	0.0					
4/16 1435		62		143	7.3	10	6.6	12	0.8	0.0	53	13	13	0.0					
5/17 1310		60		165	7.2	10	5.9	9.2	1.2	0.0	59	9.6	9.9	0.0					
6/18 1145		70		158	7.4	11	6	13	1.2	0.0	68	15	11	0.0					
7/16 1010		72		173	7.7	15	8.3	19	1.2	0.0	71	13	20	0.0					
8/21 1350		77		209	7.2	12	6.5	24	1.6	0.0	92	13	31	0.0					
9/20 1135		70		265	7.6	22	2.8	4.6	1.2	0.0	29	9.6	5.7	3.1					
10/15 1210		64		89	7.1	10	10	15	1.2	0.0	70	13	17	0.6					
11/13 1335		60		196	7.7	13	6.5	14	1.2	0.0	59	14	18	0.0					
12/26 1010		48		182	7.5	13													

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as $\frac{0.0}{0.00}$ except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

3255-4-61 6-61 2-0 20

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER NEAR VERNALIS (STA. NO. 27)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (microhmhos at 25° C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ^h																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trote (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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^a Field pH.^b Laboratory pH.^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves.^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER NEAR VERMILITE (STA. NO. 27)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potass- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sulf- ate (SO ₄)	Chlor- ide (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER NEAR VERNALIS (STA. NO. 27 continued)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved in ppm	Percent sodium	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by ^h
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)				
1962																					USGS
4/19-20				564	7.3	30 1.50	15 1.21	64 2.78	3.0 0.08	0.0 0.00	107 1.75	49 1.02	89 2.51	4.2 0.07	---	---	0.1	19	136	48	
4/21-30				418	7.3	23 1.15	9.2 0.76	46 2.00	2.3 0.06	0.0 0.00	85 1.39	29 0.60	63 1.78	3.4 0.05	0.0 0.00	---	0.1	19	96	26	
5/1-5				434	7.4	27 1.35	9.6 0.79	48 2.09	2.5 0.06	0.0 0.00	105 1.72	32 0.67	70 1.97	2.7 0.04	0.1 0.01	---	0.1	20	107	21	
5/6-9				324	7.4	20 1.00	7.1 0.58	34 1.48	2.0 0.05	0.0 0.00	50 0.82	27 0.56	49 1.38	2.8 0.05	0.1 0.01	---	0.1	18	79	38	
5/10				419	7.2	24 1.20	7.8 0.64	50 2.18	2.4 0.06	0.0 0.00	80 1.31	41 0.85	62 1.75	2.7 0.04	---	---	0.1	17	92	26	
5/11-13				162	7.1	13 0.62	2.3 0.19	15 0.65	1.6 0.04	0.0 0.00	41 0.67	12 0.25	21 0.59	2.5 0.04	0.2 0.01	---	0.0	14	42	8	
5/14-16				298	7.3	20 1.00	5.1 0.42	34 1.48	2.2 0.06	0.0 0.00	65 1.07	26 0.54	44 1.24	2.8 0.05	0.1 0.01	---	0.1	17	71	18	
5/17-31				541	7.5	33 1.65	11 0.93	62 2.70	2.8 0.07	0.0 0.00	112 1.84	46 0.96	84 2.37	3.2 0.05	0.2 0.01	---	0.2	21	129	37	
6/1-2				732	8.1	36 1.90	18 1.48	89 3.67	3.4 0.09	0.0 0.00	139 2.28	62 1.29	124 3.50	3.3 0.05	---	---	0.0	26	169	55	
6/3-14				187	7.6	11 0.55	4.3 0.35	18 0.78	1.4 0.04	0.0 0.00	45 0.74	12 0.25	26 0.73	1.3 0.02	0.1 0.01	---	0.0	15	45	8	
6/15-25				277	7.8	17 0.85	6.0 0.49	32 1.39	1.7 0.04	0.0 0.00	65 1.07	22 0.46	40 1.13	1.3 0.02	0.1 0.01	---	0.0	17	67	14	
6/26-30				497	8.1	27 1.35	12 0.99	57 2.48	2.8 0.07	0.0 0.00	100 1.64	38 0.79	80 2.26	1.8 0.03	0.1 0.01	---	0.0	23	117	35	
7/1-5				785	7.7	42 2.10	19 1.58	20 3.92	3.4 0.09	0.0 0.00	145 2.38	61 1.27	132 3.72	3.5 0.06	0.1 0.01	---	0.1	26	184	65	
7/6-16				934	7.5	50 2.50	23 1.92	105 4.57	4.2 0.11	0.0 0.00	173 2.84	72 1.50	164 4.63	3.9 0.06	0.1 0.01	---	0.2	28	221	79	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
SAN JOAQUIN RIVER NEAR VERNALIS (STA. NO. 27 continued)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ	
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)
1962																			USGS				
7/17-31					1,030	7.5	55 2.74	24 1.96	115 5.00	4.8 0.12	0.0 0.00	162 2.66	72 1.50	190 5.36	3.9 0.06	0.1 0.01	0.2	28	621	51	235	102	
8/1-10					1,010	7.6	54 2.69	23 1.93	124 5.39	4.8 0.12	0.0 0.00	180 2.95	69 1.44	187 5.28	5.7 0.09	0.1 0.01	0.1	29	615	53	231	83	
8/11-20					991	7.5	52 2.59	24 1.95	119 5.18	5.0 0.13	0.0 0.00	180 2.95	63 1.31	186 5.25	6.6 0.11	0.1 0.01	0.0	30	616	53	227	79	
8/21-31					994	7.5	52 2.59	24 1.95	120 5.22	5.0 0.13	0.0 0.00	185 3.05	68 1.42	185 5.22	5.6 0.09	0.1 0.01	0.1	31	610	53	227	74	
9/1-10					877	7.9	45 2.25	21 1.72	98 4.28	4.4 0.11	0.0 0.00	174 2.85	61 1.27	152 4.29	2.7 0.04	0.2 0.01	0.1	30	517	51	198	55	
9/11-20					919	8.0	49 2.45	21 1.75	108 4.70	4.4 0.11	0.0 0.00	183 3.00	63 1.31	160 4.51	3.3 0.05	0.3 0.02	0.2	32	553	52	210	60	
9/21-30					886	7.9	46 2.30	21 1.70	99 4.31	4.4 0.11	0.0 0.00	179 2.93	63 1.31	151 4.26	4.0 0.06	0.2 0.01	0.1	32	535	51	200	53	
10/1-13					876	7.4	46 2.30	21 1.70	102 4.44	4.2 0.11	0.0 0.00	176 2.88	54 1.12	148 4.18	4.6 0.07	0.2 0.01	0.3	32	500	52	200	56	
10/14-19					574	7.6	30 1.50	14 1.18	69 3.00	3.2 0.08	0.0 0.00	116 1.90	43 0.07	94 2.65	4.3 0.90	0.2 0.01	0.2	25	338	52	134	39	
10/20-31					756	7.5	41 2.05	17 1.38	94 4.09	3.2 0.08	0.0 0.00	136 2.23	61 1.27	132 3.72	4.2 0.07	0.2 0.01	0.1	25	438	54	171	59	
11/1-12					704	7.3	37 1.85	15 1.23	82 3.57	3.2 0.08	0.0 0.00	134 2.20	40 0.85	120 3.39	3.6 0.06	0.0 0.00	0.2	24	391	53	154	44	
11/13-25					671	7.3	34 1.70	15 1.26	77 3.35	2.8 0.07	0.0 0.00	124 2.03	54 1.12	110 3.10	2.8 0.05	0.0 0.00	0.3	24	381	53	148	46	
11/26-30					450	7.2	25 1.25	9.8 0.81	50 2.18	2.2 0.06	0.0 0.00	82 1.34	33 0.69	73 2.06	2.3 0.04	0.0 0.00	0.1	20	255	51	103	36	
12/1-7					412	7.4	24 1.20	6.8 0.56	42 1.83	2.2 0.06	0.0 0.00	74 1.21	31 0.65	66 1.86	3.4 0.05	0.2 0.01	0.1	16	228	50	88	27	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE E-14

ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER NEAR VERNALIS (STA. NO. 27 continued)

Date and time sampled P.S.T.	Discharge in cfs in 0F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by i
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Barium (B)	Silica (SiO ₂)	Other constituents			
1962																				
12/8-16			392	7.6	20 1.00	8.5 0.70	38 1.65	2.0 0.05	0.0 0.00	68 1.11	27 0.56	64 1.81	3.2 0.05	0.1 0.01	0.1 0.01	16				USGS
12/17-31			460	7.8	21 1.05	11 0.91	49 2.13	2.5 0.06	0.0 0.00	86 1.41	40 0.83	71 2.00	3.2 0.05	0.3 0.02	0.2 0.02	19	Fe 0.01			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR); as indicated.

TABLE B-214
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

SAN JOAQUIN RIVER AT WEST STANTISLAUS I. D. INTAKE (STA. 27b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃ in ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by ¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO ₃)	Bicarbonates (HCO ₃)	Sulfates (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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1/16 1030		44			1,580	66	51	194	4.7	0.0	252	226	265	5.0				1,026	53																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-14

SAN JOAQUIN RIVER AT WHITEHOUSE (STA. 24b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in op	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ ppm		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by i
			ppm	% Sol			equivalents																
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)			
1962																							
3/2 0950		51			197											172					USER		
3/17 0910		56			191											158							
3/31 0830		62			180	7.3	14	4.8	14	2.0	0.0	71	12	0.6		166	35						

^b Laboratory pH.

b Laboratory pH.

c. Sum of calcium and magnesium in gpm.
d. Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.

Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

Gravimetric determination.

Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

^h Annual median and range, respectively. Calculated from analyses of approximately 100 samples collected monthly from 1990 to 1994. ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

STANISLAUS RIVER NEAR MOUTH (STA. NO. 29)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-24
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

STATISLAUS RIVER BELOW TULLOCH DAM (STA. NO. 29a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhm-cm at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ in ppm		Tur- bidity in ppm	Coliform MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBOPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 9-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
STOCKTON SHIP CHANNEL ON RINDGE ISLAND (STA. 100)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform ^b MPN/ml	Analyzed by
						equivalents												Silica (SiO ₂)	Other constituents			
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- tro- gen (NO ₃)	Fluo- ride (F)							
1962	Tidal																					
1/10 1230		47	7.0	59	944	7.1 7.7	4.72 ^c	97 4.22		0 0.00	126 2.07		154 4.34			0.2		60	Median 620. Maximum 7000. Minimum 6.2	USGS		
2/14 1110		54	8.4	78	501	7.1 7.5	2.40 ^c	51 2.22		0 0.00	81 1.33		66 1.86			0.2		120				
3/7 1330		53	9.0	82	394	7.5 7.9	1.98 ^c	40 1.74		0 0.00	88 1.44		44 1.24			0.3		70				
4/5 1135		64	8.9	93	513	7.2 7.5	2.30 ^c	54 2.35		0 0.00	84 1.38		75 2.12			0.3		50				
5/9 1230		68	9.1	100	458	7.0 7.6	27 1.35	46 2.00	3.1 0.08	0 0.00	91 1.49	37 0.77	69 1.95	0.6 0.01	0.3 0.02	0.2	3.7 PO ₄	35				
6/11 0840		71	7.6	86	286	7.2 7.5	1.30 ^c	30 1.30		0 0.00	58 0.95		42 1.18			0.0		55				
7/9 1530		79	8.1	99	315	7.4 7.7	1.60 ^c	34 1.48		0 0.00	77 1.26		48 1.35			0.0		17				
8/1 1325		78	6.8	83	271	7.2 7.6	1.57 ^c	27 1.17		0 0.00	84 1.38		31 0.87			0.0		35				
9/4 1330		78	7.5	91	340	7.3 7.7	19 0.95	36 1.57	2.1 0.05	0 0.00	94 1.54	21 0.44	49 1.38	1.7 0.03	0.1 0.01	0.1	16 PO ₄	50				
10/8 0955		69	7.1	79	765	7.5 7.5	3.40 ^c	94 4.09		0 0.00	176 2.88		129 3.64			0.2		9				
11/14 1210		62	8.4	86	692	7.5 7.7	3.09 ^c	83 3.61		0 0.00	145 2.38		116 3.27			0.0		40				
12/4 1300		55	9.6	90	723	7.5 7.8	3.15 ^c	89 3.87		0 0.00	135 2.21		121 3.41			0.2		6				

^a Field pH^b Laboratory pH^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves.^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

STONY CREEK AT BLACK BUTTE DAM SITE (SEA. 130)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity MPN/ml in ppm	Analyzed by ^h					
			ppm	% Sat			equivalents																			
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)						Barium (Ba)	Silica (SiO ₂)	Other constituents		
1/11 1055	8	49	12.3	107	448	8.1 8.3	3.62 ^c		20 0.87		3 0.10	185 3.03		34 0.96				0.2		Tot. Alk. 191		19	191	34	10	USGS
2/14 1505	2,900	48	11.1	96	304	7.8	2.40 ^c		16 0.70		0 0.00	120 1.97		26 0.73				0.0				23	120	22	600	
3/14 1630	630	54	10.3	95	331	7.9 8.1	2.80 ^c		18 0.78		0 0.00	142 2.33		26 0.73				0.1				22	140	24	100	
4/12 1115	600	62	9.6	98	221	7.7 8.3	1.62 ^c		11 0.45		3 0.10	110 1.80		12 0.34				0.2		Tot. Alk. 117		21	91	0	35	
5/17 1230	135	67	10.1	109	267	8.3	2.6 1.30	11 0.88	14 0.61	0.8 0.02	2 0.07	120 1.97	13 0.27	16 0.45	0.2 0.00		0.1 0.01	0.2	12	PO ₄ 0.00 Tot. Alk. 124	154 ^f	22	109	7	7	
6/19 1115	96	73	9.4	108	266	8.2 8.2	2.30 ^c		13 0.57		0 0.00	134 2.20		15 0.42				0.1				20	115	5	20	
7/18 0835	85	75	7.9	92	286	8.1 8.0	2.40 ^c		14 0.61		0 0.00	148 2.43		14 0.39				0.2				20	120	0	25	
8/21 0845	159	76	7.7	91	302	8.2 8.1	2.68 ^c		15 0.65		0 0.00	162 2.66		14 0.39				0.2				20	134	1	350	
9/20 0920	60	69	8.8	97	316	8.2 8.3	3.1 1.55	14 1.13	16 0.70	0.9 0.02	5 0.17	162 2.66	15 0.31	13 0.37	1.1 0.02		0.0 0.00	0.3	12	PO ₄ 0.05 Tot. Alk. 172	188 ^f 208 ^g	21	134	0	30	
10/18 0940	60	60	10.0	100	329	8.0	2.70 ^c		16 0.70		0 0.00	147 2.41		22 0.62				0.2				21	135	14	35	
11/28 1025	75	51	10.7	96	317	7.7 7.6	2.48 ^c		16 0.70		0 0.00	121 1.98		28 0.79				0.0				22	124	25	40	
12/19 1105	400	52	11.4	104	387	7.6 8.3	2.81 ^c		23 1.00		2 0.07	137 2.25		43 1.21				0.1		Tot. Alk. 141		26	141	25	35	

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

STONY CREEK NEAR HAMILTON CITY (STA. 13a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhm-cm at 25°C)	pH a/b	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ		
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico- nate (SiO ₂)				Other constituents	
1/11 1140	DRY																			USGS					
2/14 1510	17,000	52	10.0	91	179	7.4 7.3		10 0.44		0 0.00	80 1.31		7.0 0.20			0.8			22	78	12	600	Maximum 620.		
3/15 1025	729	50	10.7	95	333	7.9 8.1		18 0.76		0 0.00	144 2.36		27 0.76			0.1			22	140	22	30	Minimum 0.23 Median 25.		
4/12 1245	495	67	9.3	100	244	7.9 8.3		12 0.52		4 0.13	111 1.82		14 0.39			0.2		Tot. Alk. 118	21	100	3	35			
5/14 1300	31	71	10.1	113	323	8.3 8.4		15 0.65	0.8 0.02	6 0.20	144 2.36		18 0.51	0.0 0.00	0.1 0.01	0.1		PO ₄ 0.00 As 0.00 Alk. 118 Tot. Alk. 156	19	136	8	3			
6/19 0950	0.3	69	7.4	81	340	7.3 7.7		15 0.65		0 0.00	165 2.70		18 0.51			0.1			19	142	7	2			
7/18 0805	DRY																								
8/21 0800	DRY																								
9/20 0850	DRY																								
10/18 0830	39	59	9.9	97	348	8.1 8.2		17 0.74		0 0.00	166 2.72		23 0.65			0.1			20	147	11	15			
11/28 0935	DRY																								
12/19 1015	274	51	11.2	100	393	7.5 8.4		26 1.13		4 0.13	140 2.29		43 1.21			0.1		Tot. Alk. 147	28	144	23	30			

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

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ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

THOMAS CREEK NEAR MOUTH (STA. 95b)

Date and time sampled P.S.T.	Oischarge in cfs Est. by Searlier	Temp in °F	Dissolved oxygen ppm	Specific conductance micromhos at 25°C	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent total solids in ppm	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Caliform h MPN/ml	Analyzed by
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boran (B)	Silica (SiO ₂)	Other constituents			
1/12 1200	28	48	10.8	93	240	7.4 8.2	5.6 0.24	5.6 0.24		0.00	1.20 1.97		8.0 0.23			0.0			14	3	USGS
2/9 1340	1,000+	53	10.2	94	147	8.1 7.4	5.0 0.22	5.0 0.22		0.00	76 1.25		1.5 0.04			0.1			8	85	
3/9 0930	100	47	11.3	96	273	7.9 8.2	7.1 0.31	7.1 0.31		0.00	142 2.33		4.2 0.12			0.1			14	60	
4/6 0935	300	54	10.5	97	120	7.6 7.8	2.6 0.11	2.6 0.11		0.00	65 1.07		1.0 0.03			0.0			2	190	
5/7 1220	35	72	8.8	100	167	8.1 8.2	4.6 0.20	4.6 0.20	0.6 0.02	0.00	88 1.44	10 0.21	3.5 0.10	0.1 0.00	0.1 0.01	0.0		PO ₄ 0.05	5	3	
6/20 0755	15	71	8.2	92	241	7.9 8.2	6.0 0.26	6.0 0.26		0.00	134 2.20		4.5 0.13			0.0			8	1	
7/2 1030	2.5	73	10.9	125	266	7.4 8.3	6.7 0.29	6.7 0.29		3 0.10	133 2.18		5.2 0.15			0.0		Tot. Alk. 132	14	2	
8/1 1130	1.0	79	9.9	121	293	7.3 7.9	7.1 0.31	7.1 0.31		0.00	154 2.52		7.0 0.20			0.1			12	3	
9/11 0930	DRY																				
10/1 0830	DRY																				
11/1 1030	3.0	68	8.8	96	254	7.4 7.7	6.1 0.27	6.1 0.27		0.00	134 2.20		2.6 0.15			0.0			6	5	
12/10 1045	100	51	11.1	99	178	7.5 7.9	4.0 0.17	4.0 0.17		0.00	97 1.59		4.0 0.11			0.0			2	10	

o Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

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TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

THOMES CREEK NEAR PASIKENTIA (STA. 134)

Date and time sampled P.S.T. 1962	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (microhms at 25°C)	pH a/b	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃ Total N.C. ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)						
1/11 1000	72	38	13.0	97	171	7.5 7.9	1.54 ^c	4.7 0.20		0 0.00	82 1.34		4.6 0.13			0.1		11	77	10	2	USGS
2/14 1340	622	43	11.9	96	148	7.5 7.7	1.36 ^c	4.0 0.17		0 0.00	74 1.21	7.0 0.15	2.8 0.08			0.0		11	68	7	70	
3/14 1535	200	49	10.9	95	243	7.9 8.2	2.36 ^c	5.9 0.26		0 0.00	122 2.00		5.1 0.14			0.0		10	118	18	25	
4/12 1030	775	51	10.4	93	98	7.5 7.9	0.88 ^c	2.7 0.12		0 0.00	50 0.82		4.6 0.13			0.1		12	44	3	50	
5/17 1130	163	61	9.5	96	154	8.0	1.00	4.1 0.18	0.5 0.01	0 0.00	78 1.28	11 0.23	2.8 0.08	0.1 0.01	0.0	11	92 ^f	70	6	3		
6/19 1200	61	79	8.0	98	175	8.2 8.3	1.62 ^c	4.9 0.21		2 0.07	85 1.39		3.5 0.10			0.0	Tot. Alk. 89	81	8	2		
7/18 0930	10	78	8.6	104	271	8.3 8.2	2.35 ^c	10 0.44		0 0.00	120 1.97		4.4 0.39			0.1		16	117	19	1	
8/21 0935	5.1	75	7.9	92	392	8.1 8.2	3.40 ^c	15 0.65		0 0.00	180 2.95		25 0.71			0.1		16	173	25	7	
9/20 1020	1.8	70	8.9	99	414	8.0 8.3	2.45 ^c	14 1.13	1.3 0.03	8 0.27	154 2.52	29 0.60	36 1.02	1.3 0.02	0.1 0.01	0.2	11	244 ^f 274 ^g	179	40	9	
10/18 1045	84	52	10.9	99	140	7.5 7.8	1.24 ^c	4.5 0.20		0 0.00	73 1.20		4.2 0.12			0.1		14	62	2	20	
11/28 1105	389	45	11.9	98	119	7.5 7.7	1.05 ^c	3.5 0.15		0 0.00	61 1.00		3.8 0.11			0.0		12	53	3	30	
12/19 1200	433	46	11.7	98	136	7.5 8.0	1.24 ^c	3.6 0.16		0 0.00	74 1.21		2.2 0.06			0.0		11	62	1	40	

a Field pH.

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

TULE RIVER BELOW SUCCESS DAM (STA. NO. 91)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ in ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by i																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
1962	12	50	15.2	135	455	8.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE P-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO.5)

TUOLUMNE RIVER BELOW DON PEDRO DAM (STA. NO. 31a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micro-mhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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o Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

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TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)

TUOLUMNE RIVER AT HICKMAN-WATERFORD BRIDGE (STA. NO. 30)

Date and time sampled P.S.T.	Discharge Temp in cfs in °F	Dissolved oxygen ppm	Specific conductance (micro-mhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per-cent acid-tum	Hardness as CaCO ₃ Total ppm	Tur-bid-ity in ppm	Coliform MPN/ml	Analyzed by
					Calcium (Ca)	Magne-sium (Mg)	Sodium (Na)	Potas-sium (K)	Carbon-ate (CO ₃)	Bicar-bon-ate (HCO ₃)	Sul-fate (SO ₄)	Chlo-ride (Cl)	Ni-trate (NO ₃)	Fluo-ride (F)	Boron (B)	Other constituents				
1962																				USGS
1/19	155	7.4	70	7.8	^c 2.68		58 2.52		0.0 0.00	112 1.84		108 3.05			0.1		134	42	Median 46.	
1315																			Maximum 7000.	
2/7	165	5.3	51	7.8	^c 2.40		55 2.39		0.0 0.00	106 1.74		106 2.99			0.0		120	33	Minimum 2.1	
1320																				
3/9	4,329	9.2	80	7.4	^c 0.66		3.1 0.13		0.0 0.00	34 0.56		9.0 0.11			0.0		33	5		
1350																				
4/9	664	9.7	98	8.0	^c 0.92		11 0.48		0.0 0.00	48 0.79		16 0.45			0.1		46	7		
1500																				
5/9	119	7.0	82	7.9	28 1.40	11 0.88	52 2.26	5.0 0.13	0.0 0.00	106 1.74	5.8 0.12	25 2.68	0.5 0.01	0.1 0.01	0.1	PO ₄ 0.15	114	27		
1510																				
6/7	117	10.2	124	8.5	^c 2.10		54 2.35		6 0.20	110 1.61		99 2.79			0.1		120	30		
1400																				
7/3	113	6.5	79	8.2	^c 2.18		65 2.83		0.0 0.00	114 1.87		114 3.22			0.2		124	31		
1200																				
8/13	125	7.8	94	8.0	^c 2.14		62 2.70		0.0 0.00	118 1.93		106 2.99			0.0		122	25		
1015																				
9/8	135	9.0	104	8.2	31 1.55	9.8 0.81	56 2.14	5.4 0.11	0.0 0.00	117 1.92	4.2 0.69	104 2.93	0.2 0.06	0.2 0.01	0.1	PO ₄ 0.05	118	22		
1340																				
10/18	---	8.0	85	7.0	^c 0.60		11 0.48		0.0 0.00	32 0.52		21 0.59			0.0		30	4		
1300																				
11/	No sample collected.																			
12/10	488	9.5	89	7.0	^c 0.36		5.3 0.23		0.0 0.00	18 0.30		10 0.28			0.0		18	3		
1215																				

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

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TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

TUOLUMNE RIVER AT TUOLUMNE CITY (STA. NO. 31)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific Conductance (at 25°C)	pH	Mineral constituents in equivalents per million										Total dissolved solids in ppm	Percent anion sum	Hardness as CaCO ₃ ppm		Turbidity in ppm	Coliform MPN/ml	Analyzed by ¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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a Field pH

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

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g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (NO. 5)
YUBA RIVER AT MARYSVILLE (STA. 21)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm N.C. ppm	Tur- bid- ity in ppm	Coliform ^h MPN/ml Maximum 2400. Minimum 0.23	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE R-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)
YUBA RIVER NEAR SMARTVILLE (STA. 21a)

Date and time sampled P.S.T.	Discharge in cfs M. N.	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million equivalents per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ ppm	Turbidity in nptm	Coliform ^h MPN/ml	Analyzed by ⁱ
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)				
1962																					
1/5 1050	623	46	12.2	102	7.3 7.8	0.96 ^c	2.5 0.11	2.5 0.11		0 0.00	54 0.89		1.5 0.04			0.0			48	6	Median 51
2/8 0915	697	44	11.8	96	7.1 7.9	0.94 ^c	3.0 0.13	3.0 0.13		0 0.00	47 0.77		2.8 0.08			0.0			47	20	Maximum 290, Minimum 0.094
3/15 1000	1020	46	12.1	101	7.4 7.7	0.72 ^c	2.0 0.09	2.0 0.09		0 0.00	36 0.59		1.0 0.03			0.0			36	35	
4/5 1230	4570	54	11.9	110	7.4 7.7	0.64 ^c	2.8 0.12	2.8 0.12		0 0.00	37 0.61		2.5 0.07			0.0			32	2	
5/15 1200	2720	57	11.1	107	7.3 7.6	6.8 0.34	1.0 0.08	1.7 0.07	0.3 0.01	0 0.00	26 0.43	1.0 0.02	2.0 0.06	0.0 0.00	0.1 0.01	0.0	12		21	0	
6/11 1200	2950	62	9.7	99	7.2 7.3	0.44 ^c		1.6 0.07		0 0.00	27 0.44		2.0 0.06			0.0			22	0	
7/2 1110	746	65	9.1	96	7.3 7.7	0.49 ^c		2.1 0.09		0 0.00	30 0.49		2.0 0.06			0.0			24	0	
8/14 1515	504	74	8.7	102	7.4 7.5	0.84 ^c		3.0 0.13		0 0.00	51 0.84		1.8 0.05			0.1			42	0	
9/10 1430	405	73	8.4	97	7.4 7.6	1.7 0.85	2.1 0.17	3.2 0.14	0.5 0.01	0 0.00	62 1.02	5.2 0.11	1.8 0.05	0.0 0.00	0.1 0.01	0.1	15		51	0	
10/1 1105	408	72	8.6	98	7.0 7.7	1.06 ^c		3.2 0.14		0 0.00	69 1.13		1.5 0.04			0.0			53	0	
11/1 1255	1010	57	10.2	98	6.8 7.2	0.50 ^c		1.8 0.08		0 0.00	30 0.49		0.8 0.02			0.0			25	0	
12/3 1315	13600	51	11.7	104	7.3 7.4	0.71 ^c		2.6 0.11		0 0.00	43 0.70		2.0 0.06			0.0			36	1	

^a Field pH^b Laboratory pH^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{VI}), reported here as 0.0 except as shown. 0.00^e Derived from conductivity vs TDS curves^f Determined by addition of analyzed constituents.^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-15
ANALYSES OF SURFACE WATER

LAHONTAN REGION (NO. 6)
CARSON RIVER, EAST FORK NEAR MARKEEVILLE (STA. 115)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (microhmhos at 25°C)	pH ^a	Mineral constituents in equivalents per million								Total dis- solved Solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by i							
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potass- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sulf- ate (SO ₄)	Chlor- ide (Cl)							Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silica (SiO ₂)	Other constituents		
1962																											
1/9 1030	46	33	12.0	83	158	7.6 8.1	1.02 ^c		13 0.57		0 0.00	74 1.21		6.5 0.18			0.2				117 ^e	36	51	0	3	Median 6.2 Maximum 2400. Minimum 0.23	USGS
2/6 1130	68 MD	33	11.8	82	127	7.3 7.9	0.84 ^c		9.2 0.42		0 0.00	61 1.00		5.0 0.14			0.1				94 ^e	33	42	0	40		
3/13 1215	86	36	11.4	83	222	7.6 8.1	1.64 ^c		13 0.57		0 0.00	87 1.43		5.5 0.16			0.2				164 ^e	26	82	11	3		
4/3 1040	355	40	11.2	86	156	8.4 7.9	1.08 ^c		9.9 0.43		0 0.00	70 1.15		4.5 0.13			0.1				115 ^e	28	54	0	30		
5/10 1030	1310	46	10.6	89	57	7.3 7.6	6.4 0.32	1.2 0.10	3.4 0.15	0.9 0.02	0 0.00	29 0.48	1.0 0.02	1.5 0.04	0.1 0.00	0.2 0.01	0.0	15	PO ₄ 0.10	44 ^f	25	21	0	20			
6/14 0930	1040	44	10.0	81	50	7.5 7.4	0.70 ^c		3.4 0.15		0 0.00	34 0.56		1.8 0.05			0.0				37 ^e	27	20	0	10		
7/12 0915	333	51	9.1	81	64	7.5 7.6	0.41 ^c		4.3 0.19		0 0.00	34 0.56		2.2 0.06			0.0				47 ^e	30	22	0	20		
8/9 0945	124 MD	59	8.5	84	101	7.9 7.9	0.73 ^c		6.5 0.28		0 0.00	57 0.93		2.1 0.06			0.0				75 ^e	28	37	0	10		
9/12 1045	77	53	8.9	81	94	7.5 8.0	9.6 0.48	2.4 0.20	6.4 0.28	1.0 0.03	0 0.00	50 0.82	4.0 0.08	2.5 0.07	0.2 0.00	0.1 0.01	0.2	22	PO ₄ 0.05	73 ^f 78 ^g	78	34	0	2			
10/4 1055	63	51	9.2	82	142	7.5 7.9	0.91 ^c		14 0.61		0 0.00	74 1.21		4.0 0.11			0.0				105 ^e	40	46	10	5		
11/8 1205	68	43	10.6	85	123	7.5 7.8	0.86 ^c		8.6 0.37		0 0.00	64 1.05		4.4 0.12			0.1				91 ^e	30	43	0	1		
12/13 1020	56	33	11.7	81	131	7.3 7.9	0.91 ^c		9.4 0.41		0 0.00	66 1.08		4.8 0.14			0.1				97 ^e	31	45	0	1		

^a Field pH

^b Laboratory pH

^c Sum of calcium and magnesium in epm

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents.

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR); as indicated.

TABLE B-15
ANALYSES OF SURFACE WATER

LAHONTAN REGION (NO. 6)
CARSON RIVER, WEST FORK AT WOODSFORDS (STA. 115a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmohms at 25°C)	pH ^a	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃		Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by 1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
			ppm	% Sol			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	equivalents per million					Total ppm	N.C. ppm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
														Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)								Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTAN REGION (NO. 6)
LAKE TAHOE AT ELIJOU (STA. 39)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen	Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sed- ium in ppm	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by ⁱ					
						equivalents per million																				
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Baron (B)	Silica (SiO ₂)	Other constituents		
1962																										
1/9 0800		38	10.0	75	95	7.5 7.9		5.6 0.24		0 0.00	56 0.92		1.8 0.05			0.1				62 ^e	23	41	0	3	Median 0.23	USGS
2/6 0840		39	9.8	75	91	7.3 7.9		5.5 0.24		0 0.00	49 0.86		3.2 0.09			0.1				59 ^e	26	35	0	2	Maximum 23. Minimum ≤0.045	
3/13 0900		34	10.5	74	93	7.5 7.9		6.0 0.26		0 0.00	50 0.88		3.1 0.09			0.0				61 ^e	28	33	0	1		
4/3 0830		48	9.5	82	94	7.4 7.8		6.8 0.30		0 0.00	51 0.84		2.5 0.07			0.0				61 ^e	30	35	0	3		
5/10 0730		45	10.1	83	90	7.4 7.8	1.5 0.12	5.9 0.26	1.5 0.04	0 0.00	49 0.86	1.0 0.02	3.2 0.09	0.0 0.00	0.1 0.01	0.0	1.3	PO ₄ 0.00		60 ^f	28	31	0	1		
6/14 0715		56	8.3	79	88	7.6 7.6		6.5 0.28		0 0.00	48 0.79		2.2 0.06			0.0				57 ^e	31	31	0	1		
7/12 0720		61	7.5	76	86	7.5 7.7		6.7 0.29		0 0.00	47 0.77		3.5 0.10			0.0				56 ^e	33	30	0	6		
8/9 0720		58	7.8	76	91	7.7 7.9		6.4 0.28		0 0.00	51 0.84		2.0 0.06			0.0				59 ^e	31	31	0	10		
9/13 0720		55	7.8	73	95	7.5 7.9	3.2 0.26	6.2 0.27	1.4 0.04	0 0.00	54 0.89	1.0 0.02	2.5 0.07	0.3 0.00	0.1 0.01	0.0	1.3	PO ₄ 0.00		64 ^f 64 ^g	27	35	0	2		
10/4 0750		52	7.8	70	97	7.3 7.6		6.8 0.30		0 0.00	56 0.92		2.8 0.08			0.1				63 ^f	31	34	0	10		
11/8 0845		45	9.1	76	95	7.4 7.9		6.1 0.27		0 0.00	54 0.89		1.8 0.05			0.0				62 ^e	28	34	0	1		
12/13 0855		39	9.8	75	96	7.3 7.8		5.7 0.25		0 0.00	55 0.90		3.1 0.09			0.0				63 ^e	27	33	0	1		

^a Field pH^b Laboratory pH^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.
0.00^e Derived from conductivity vs TDS curves^f Determined by addition of analyzed constituents^g Gravimetric determination.^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-15
ANALYSES OF SURFACE WATER
LAHONTAN REGION (NO. 6)
LAKE TAHOE AT TAHOE CITY (STA. 38)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in equivalents per million								Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by ^c																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potass- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)			Ni- trate (NO ₃)	Fluo- ride (F)				Boron (B)	Silico (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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^a Field pH

^b Laboratory pH

^c Sum of calcium and magnesium in ppm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents.

^g Gravimetric determination

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-15
ANALYSES OF SURFACE WATER
LAHONTAN REGION (NO. 6)
LAKE TAHOE AT TAHOE VISTA (STA. 37)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by i																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)									Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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^a Field pH

^b Laboratory pH

^c Sum of calcium and magnesium in ppm.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

^e Derived from conductivity vs TDS curves.

^f Determined by addition of analyzed constituents.

^g Gravimetric determination

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH), Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-15
ANALYSES OF SURFACE WATER
LAHAYTON REGION (NO. 6)
MOJAVE RIVER AT THE FORKS (STA. 67a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (microhmhos at 25° C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by 1		
						equivalents																	
						Calcium (Ca)	Magna- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trote (NO ₃)	Fluo- ride (F)							Baron (B)	Silico (SiO ₂)
1962																							
1-5 1000	30 est.	40	11.6	98	315	7.3 ^a		37 1.61		0 0.00	126 2.06		10 0.28			0.09		50	82	0	<25	6.2 6.2	DMR
2-13 1335	Crossing flooded Cannot get to station																						
3-12 1000	150 est.	44	11.6	96	164	7.4 ^a	3.0 0.25	12 0.52	1.0 0.02	0 0.00	71 1.16	11 0.23	7 0.20	2.0 0.03	0.5 0.02	0.08	27	32	55	0	<25	<0.15 <0.15	
4-2 1540	150 est.	56	10.8	102	111	7.6 ^a		2 0.39		0 0.00	56 0.92		4 0.11			0.04		33	40	0	<25	2.3 6.2	
5-14 1545	30 est.	60	8.4	84	175	7.4 ^a	3 0.26	15 0.65	1.5 0.04	0 0.00	84 1.38	8.2 0.17	4 0.11	1.0 0.01	0.8 0.04	0.08	23	37	53	0	<25	6.2 13	
6-11 1140	20 est.	78	7.2	87	210	7.4 ^a		19 0.83		0 0.00	96 1.58		5 0.14			0.00		38	68	0	<25	6 23	
7-5 1310	5 est.	84	6.4	82	277	7.8 ^a	4.3 0.35	30 2.77	2.1 0.05	0 0.00	111 1.82	31 0.65	6 0.17	0.2 0.00	1.4 0.07	0.10	28	20	70	0	<25	23 62	
8-1 1445	3 est.	85	7.6	99	379	7.6 ^a		41 1.78		9.6 0.32	107 1.76		11 0.31			0.17		52	82	0	<25	21 31	
9-12 1440	1 est.	80	8.8	108	482	7.6 ^a	7.4 0.61	59 2.57	3.5 0.09	4.8 0.16	132 2.16	96 2.01	14 0.39	0.5 0.00	3.2 0.17	0.21	23	336	108	0	<25	6 6	
10-4 1320	3 est.	70	7.6	85	565	7.7 ^a		71 3.09		0 0.00	126 2.06		16 0.45			0.22		58	113	10	<25	62 23	
11-5 1040	7 est.	58	8.4	81.7	443	7.5 ^a		62 2.70		0 0.00	127 2.08		11 0.31			0.23		61	88	0	<25	700 700	
12-3 1435	10 est.	60	8.4	83	472	7.3 ^a		43 1.87		0 0.00	185 3.04		25 0.71			0.10		40	141	0	<25	230 6	

o Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE 11-15

ANALYSES OF SURFACE WATER

LAHANTON REGION (NO. 6)
MOJAVE RIVER NEAR VICTORVILLE (STA. 67)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micro-mhos at 25°C)	pH	Mineral constituents in parts per million											Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)			Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-15
ANALYSES OF SURFACE WATER

LAHONTAN REGION (NO. 6)

SUSAN RIVER AT SUSANVILLE (SDA. 17b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in								Parts per million				Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ		
			ppm	% Sat ^j			equivalents								per million											
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)	Boron (B)	Silico (SiO ₂)							Other constituents	
1/28/62 1431	4.9	34	11.8	83	167	7.5 8.2	1.50 ^c	5.0 0.22		105 1.72			0.0 0.00				0.0 0.00				13	75	0	1	Maximum 1,300.	USGS
2/13 1600	57	33	11.6	81	126	7.5 7.7	1.08 ^c	4.6 0.20		68 1.11			2.8 0.06				0.0 0.00				16	54	0	20	Minimum 2-3	
3/13 1325	37	37	11.6	85	153	7.5 8.0	1.52 ^c	5.3 0.23		90 1.48			3.6 0.10				0.1 0.10				13	76	2	8	Median 56.	
4/10 1710	265	50	9.5	84	84	7.5 7.9	0.68 ^c	3.0 0.17		46 0.75			3.8 0.11				0.2 0.11				20	34	0	25		
5/2 1725	165	58	8.5	83	83	7.5 7.5	2.2 0.46	3.0 0.25	1.0 0.03	47 0.77	1.0 0.02		1.5 0.04	0.7 0.01	0.1 0.01		0.0 0.01	24	PO ₄ 0.05	66 ^f	17	35	0	4		
6/14 1500	43	57	8.9	86	99	7.7 7.9	0.96 ^c	3.5 0.15		60 0.96			1.8 0.05				0.0 0.00				14	48	0	1		
7/12 1205	120	67	7.6	82	57	7.6	0.50 ^c	2.1 0.09		34 0.56			1.2 0.03				0.0 0.00				15	25	0	4		
8/16 0830	3.7	64	7.8	81	183	7.6 7.9	1.66 ^c	7.6 0.33		120 1.97			0.5 0.01				0.0 0.00				17	83	0	9		
9/18 1445	2.1	66	8.1	86	194	7.7 8.1	2.1 1.05	8.6 0.71	2.4 0.06		128 2.10	1.0 0.02	0.5 0.01	0.4 0.01	0.0 0.00		0.0 0.00	40	PO ₄ 0.10	144 ^f 157 ^g	15	88	0	5		
10/17 1310	200	43	10.7	86	88	7.3 7.5	0.72 ^c	4.2 0.18		50 0.82			0.8 0.02				0.0 0.00				20	36	0	20		
11/20 1530	44	40	11.5	88	121	7.3 8.0	1.06 ^c	4.5 0.20		76 1.25			1.5 0.04				0.0 0.00				16	53	0	1		
12/18 1640	230	44	10.9	89	93	7.3 8.1	0.79 ^c	3.7 0.16		56 0.92			1.2 0.03				0.0 0.00				17	40	0	7		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-15
ANALYSES OF SURFACE WATER
LABONTIAN REGION (NO. 6)
TRUCKEE RIVER NEAR PARAD (STA. 53)

Date and time sampled P.S.T.	Discharges in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micro-mhos at 25° C)	pH ^a	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃ in ppm		Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO ₃)	Bicarbonates (HCO ₃)	Sulfates (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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^a Field pH.

^b Laboratory pH.

^c Sum of calcium and magnesium in epi.

^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

^e Derived from conductivity vs TDS curves

^f Determined by addition of analyzed constituents.

^g Gravimetric determination.

^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTAN REGION (NO. 6)
TRUCKEE RIVER NEAR TRUCKEE (STA. 52)

Date and time sampled P S T	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sed- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE B-15
ANALYSES OF SURFACE WATER
LAJONTAN REGION (NO. 6)
WALKER RIVER, EAST NEAR BRIDGEPORT (STA. 116a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH ^a	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium in ppm	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by			
			ppm	% Sat			equivalents per million																		
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents
1962																									
1/9 1330	4.7	44	8.8	72	301	7.6 8.2		28 1.84 ^c	4.4 0.11	0 0.00	145 2.38		6.5 0.18			0.1			203 ^e	38	92	0	3	Median 23.	USGS
2/6 1500	5.8	44	8.7	71	279	7.4 8.2		23 1.88 ^c		0 0.00	142 2.33		5.2 0.16			0.0			188 ^e	35	94	0	15	Maximum >7000. Minimum 0.62	
3/13 1500	5.8	42	9.8	78	395	7.6 8.0		49 2.13		0 0.00	156 2.56		21 0.59			0.4			266 ^e	54	89	0	10		
4/3 1345	5.6	42	9.2	74	425	7.6 7.8		55 2.39		0 0.00	174 2.85		18 0.51			0.5			286 ^e	57	90	0	10		
5/10 1330	231	60	8.4	84	229	7.6 8.0	4.6 0.38	21 0.91	4.0 0.10	0 0.00	109 1.79	21 0.14	5.5 0.16	0.4 0.01	0.3 0.02	0.1	22	PO ₄ 0.25	153 ^f	38	69	0	5		
6/14 1235	251	60	7.7	77	218	8.4 7.9		19 0.83		0 0.00	110 1.86		4.3 0.12			0.1			147 ^e	38	67	0	5		
7/12 1250	338 MD	63	6.7	69	163	8.1 7.4		13 0.57		0 0.00	81 1.33		4.2 0.12			0.1			110 ^e	35	54	0	15		
8/9 1200	262	69	7.0	78	178	8.3 7.6		14 0.61		0 0.00	94 1.54		3.6 0.10			0.1			120 ^e	33	61	0	10		
9/13 1325	239	65	7.6	81	197	8.3 8.7	4.3 0.35	15 0.65	3.8 0.10	10 0.33	90 1.48	12 0.25	2.0 0.06	0.7 0.01	0.3 0.02	0.1	5.0	PO ₄ 0.10	118 ^f 117 ^g	30	70	0	15		
10/4 1300	80	58	7.4	72	210	8.4 7.6		15 0.65		0 0.00	116 1.90		2.9 0.08			0.1			142 ^e	29	78	0	9		
11/8 1430	16	48	9.8	84	220	8.2 7.7		14 0.61		0 0.00	122 2.00		2.6 0.07			0.1			148 ^e	28	77	0	8		
12/13 1220	11	40	10.6	82	223	7.6 8.0		15 0.65		0 0.00	124 2.03		4.3 0.12			0.1			150 ^e	29	81	0	3		

a Field pH
b Laboratory pH
c Sum of calcium and magnesium in epm.
d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.
e Derived from conductivity vs TDS curves
f Determined by addition of analyzed constituents.
g Gravimetric determination.
h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.
i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTAN REGION (NO. 6)
WALKER RIVER, WEST NEAR COLEVILLE (STA. 116)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent acid- sol- um	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ
			ppm	%Sat			equivalents						per million										
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)			
1962																							
1/9 1215	31 MD	34	11.4	80	161	7.6 8.0	1.06 ^c	17 0.74		0	84 1.38		3.9 0.11			0.0				53	0	2	USGS
2/6 1400	37	33	11.6	80	105	7.2 7.9	0.72 ^c	7.1 0.31		0	56 0.92		3.2 0.09			0.0				36	0	15	
3/13 1400	40 MD	33	12.2	81	162	7.6 8.1	0.81 ^c	17 0.74		0	78 1.28		6.5 0.18			0.2				44	0	5	
4/3 1245	110	43	11.1	89	101	8.4 8.0	0.86 ^c	6.6 0.29		0	54 0.89		3.7 0.10			0.0				40	0	4	
5/10 1430	806	48	9.8	84	45	7.2 7.3	4.8 0.24	2.3 0.10	0.6 0.02	0	22 0.36	1.0 0.02	1.5 0.04	0.2 0.00	0.1 0.01	0.0	8.6	PO ₄	17	0	20		
6/14 1130	998	40	10.3	79	37	7.3 7.4	0.30 ^c	1.6 0.07		0	16 0.26		1.5 0.04			0.0				15	2	5	
7/12 1145	525	48	9.1	78	38	7.1 7.4	0.28 ^c	2.0 0.09		0	20 0.33		1.7 0.05			0.0				14	0	10	
8/9 1100	232	57	8.6	83	63	7.3 7.5	0.52 ^c	3.3 0.14		0	33 0.54		1.9 0.05			0.1				26	0	10	
9/13 1225	63	59	8.9	88	134	7.5 7.9	1.5 0.75	8.5 0.37	0.9 0.02	0	71 1.16	8.0 0.17	1.8 0.05	0.0 0.00	0.1 0.01	0.0	13	PO ₄	49	0	2		
10/4 1210	42	47	9.5	81	125	7.5 8.1	1.00 ^c	9.6 0.42		0	68 1.11		4.0 0.11			0.1				50	0	3	
11/8 1330	44	43	10.7	86	110	7.4 7.9	0.71 ^c	8.6 0.37		0	59 0.97		3.5 0.10			0.0				35	0	2	
12/13 1130	37 MD	35	11.1	79	152	7.3 8.1	0.86 ^c	15 0.65		0	79 1.29		4.0 0.11			0.1				43	0	1	

^a Field pH^b Laboratory pH^c Sum of calcium and magnesium in ppm.^d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.^e Derived from conductivity vs TDS curves^f Determined by addition of analyzed constituents.^g Gravimetric determination^h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.ⁱ Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE E-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN REGION (NO. 7)
ALAMO RIVER NEAR CALIPATRIA (STA. 60)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total N C ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by	
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- sum (K)	Carbon- ates (CO ₃)	Bicar- bonates (HCO ₃)	Sul- fates (SO ₄)	Chlo- rides (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)
1962																							
1-3 1415	411	58	9.2	89	4789	7.7 ^a	223 11.13	139 11.45	663 28.84	10 0.26	0 0.00	264 4.32	853 17.78	1000 28.20	27 0.44	1.4 0.07	0.72	12					DWR
3-6 1240	998	61	8.8	89	3460	7.8 ^a	168 8.38	113 9.34	448 19.49	10 0.25	0 0.00	214 3.50	710 14.86	630 17.77	18 0.29	0.8 0.04	0.42	16					DWR
3-13 1000	995 est.	58			3219	7.6	179 8.96	78 6.44	428 18.60	12 0.30	0 0.00	209 3.44	698 14.55	574 16.16	6 0.09	0.70 0.04	0.46	2	NH ₄ = $\frac{2.2}{2}$ Total N = 2 NO ₂ = 0.10 PO ₄ = $\frac{4.58}{2}$ ABS = $\frac{0.75}{2}$; BOD=12				TTL
5-10 1215	1069	68	6.8	74	3401	7.9 ^a	178 8.88	96 7.89	438 19.05	12 0.31	0 0.00	220 3.60	711 14.82	620 17.48	20 0.32	0.76 0.04	0.50	12					DWR
7-3 0930	1121	84	7.6	97	3372	7.9 ^a		442 19.23			0 0.00	215 3.52		590 16.64			0.52						DWR
9-4 1715	1050	88	6.8	91	3492	7.9 ^a	174 8.68	96 7.89	475 20.66	12 0.31	0 0.00	210 3.44	734 15.29	670 18.89	16 0.26	0.66 0.03	0.56	17					DWR
11-7 1610	950	72	8.4	95.4	3990	7.6 ^a		518 22.83			0 0.00	222 3.64		770 21.71			0.52						DWR

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-15

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN REGION (NO. 7)
ALAMO RIVER AT INTERNATIONAL BOUNDARY (STA. 59)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °C	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million											Total dissolved solids in ppm	Per-cent sodium in ppm	Hardness as CaCO ₃ ppm	Tur-bid-ity in ppm	Caliform ^h MPN/ml	Analyzed by ⁱ				
			ppm	% Sat		Calcium (Ca)	Magne-sium (Mg)	Sodium (Na)	Potas-sium (K)	Carbon-ate (CO ₃)	Bicar-bonate (HCO ₃)	Sul-fate (SO ₄)	Chlo-ride (Cl)	Ni-trate (NO ₃)	Fluo-ride (F)	Baron (B)							Silica (SiO ₂)	Other constituents		
																								PO ₄ = 0.08 As = 0.00	PO ₄ = 0.08	
1962																										
1-3 1220	2.2	56	9.4	89	5236	218 10.88	141 11.60	789 34.32	10 0.26	0 0.00	393 6.44	1044 21.76	1010 20.43	9.9 0.16	1.5 0.03	1.52	12		3549	60	1124	302	60	2.3 240		DMR
3-6 1630	2.2	70	8.8	97	5345			842 36.63		0 0.00	323 5.30		1040 29.33			1.62			64	64	1039	774	30	6.2 2.3		
5-10 0950	2	78	8.4	100	5348	242 12.08	130 10.69	840 36.54	14 0.36	0 0.00	351 5.76	1136 23.65	1080 30.46	0 0.00	0.76 0.04	1.60	14	PO ₄ = 0.08 As = 0.00	3740	61	1134	846	50	24 24		
7-3 0700	3	84	5.6	72	6447	230 11.43	174 14.28	1008 43.85	13 0.33	0 0.00	345 5.66	1248 26.01	1340 37.79	8.7 0.14	1.1 0.06	2.00	19		4365	63	1288	1005	<25	2.3 2.3		
9-5 0750	2	82	4.0	50	6702	242 12.03	230 18.19	1050 45.63	12 0.31	0 0.00	334 5.43	1287 26.42	1540 43.43	5.0 0.03	0.98 0.05	2.25	31	PO ₄ = 0.08	4730	60	1293	1019	<25	62 130		
11-8 0610	2.8	66	6.8	72.8	3808			553 23.19		0 0.00	290 4.76		692 19.51			1.06			59	59	797	559	<25	62 62		

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 6-14

ANALYSES OF SURFACE WATER

COLORADO RIVER FAULT AND IRRIGATION

ALL AMERICAN CANAL NEAR PILOT KIVE STA. 5000

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micro-mhos at 25°C)	pH	Mineral constituents in parts per million											Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by i																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Barium (Ba)							Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DMR); United States Agricultural Consultants and Laboratories (USACL) as indicated.

3-205-1-44 6-61 20 390

TABLE B-1f
ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN REGION (NO. 7)
COLORADO RIVER NEAR BLYTHE (STA. 56c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^b MPN/ml	Analyzed by ¹					
			ppm	% Sat			equivalents per million																					
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents				
1962																												
5-15 1645	11000 est	72	8.4	95	1164	8.0 ^a	95 4.74	28 2.30	109 4.74	5.0 0.13	0 0.00	161 2.64	306 6.37	96 2.71	2.8 0.04	0.58 0.03	0.15	10	PO ₄ = 0.08 As ^b = 0.00			734	40	352	220	< 25	6 6	DWR
9-18 1245	10000 est	86	8.0	102	1144	8.0 ^a	88 4.39	32 2.67	111 4.33	5.2 0.13	0 0.00	153 2.50	315 6.56	100 2.82	1.4 0.02	0.60 0.03	0.15	12	PO ₄ = 0.04			774	40	353	228	< 25	23 23	DWR

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 1-16
ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN REGION (NO. 7)
COLORADO RIVER AT COLORADO RIVER AQUEDUCT INTAKE (STA. 56d)

Date and time sampled P.S.T	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance at 25°C	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Califormity MPN/ml	Analyzed by	
			ppm	% Sat			equivalents per million																	
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Barium (Ba)	Silica (SiO ₂)				Other constituents
1962																								
1-16		50			1080	8.3 ⁶	88 4.39	28.5 2.34	97 4.22	5 0.13	0 0.00	141 2.44	290 6.03	90 2.54	1.6 0.03	0.4 0.02	9.3	Free CO ₂ = 1 ppm	684	38	337	215	0.9	MWD
2-13 1000		53			1050	8.4 ⁶	86 4.29	29 2.35	95 4.13	5 0.13	4 0.13	140 2.30	289 6.01	89 2.51	0.9 0.01	0.4 0.02	9.1	Free CO ₂ = 1 ppm	677	38	334	213	1.0	
3-13 1005		55			1065	8.4 ⁶	88 4.39	28 2.30	94 4.09	6 0.15	1 0.03	143 2.43	290 6.03	85 2.40	1.4 0.03	0.4 0.02	9.3	Free CO ₂ = 1 ppm	677	37	335	212	1.5	
4-10 1000					1055	8.3 ⁶	87 4.34	29 2.34	96 4.18	5 0.13	4 0.13	142 2.33	289 6.01	88 2.42	2.3 0.04	0.4 0.02	9.3	Free CO ₂ = 1 ppm	681	38	334	212	0.6	
6-5		74			1110	8.4 ⁶	90 4.49	30 2.42	100 4.35	5 0.13	4 0.13	143 2.35	309 6.43	89 2.51	2.2 0.04	0.4 0.02	2	Free CO ₂ = 1 ppm	710	38	346	223	0.3	
7-3 1100		82			1115	7.9 ⁶	86 4.29	30 2.42	100 4.35	5 0.13	0 0.00	138 2.26	304 6.32	93 2.62	2.3 0.04	0.4 0.02	10		699	39	336	332	0.3	
8-22		83			1105	8.5 ⁶	86 4.29	30 2.42	104 4.52	5 0.13	2 0.07	124 2.03	314 6.53	96 2.71	1.9 0.03	0.4 0.02	10		711	40	336	230	0.7	
9-4		80			1110	8.3 ⁶	84 4.19	30 2.42	101 4.39	5 0.13	0 0.00	128 2.10	306 6.36	94 2.65	1.6 0.03	0.4 0.02	10		696	39	331	226	0.2	
10-2					1110	8.4 ⁶	83 4.14	30 2.47	106 4.61	4 0.10	2 0.07	131 2.15	306 6.36	96 2.71	1.5 0.02	0.5 0.03	9.8		704	41	331	220	0.3	
11-21 1005		69					87 4.34	29.5 2.42	100 4.35	5 0.13	2	134	307	94	1.6	0.4	10.1		704	-	339	225	0.3	
12-4		61			1130	8.3 ⁶	90 4.19	30 2.47	109 4.74	5 0.13	0 0.00	149 2.44	315 6.55	96 2.71	2.2 0.04	0.4 0.02	9.9	Free CO ₂ = 1 ppm	732	40	343	226	0.3	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-16
ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN REGION (NO. 7)
COLORADO RIVER BELOW MORELOS DAM (STA. 56b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Baron (B)	Silica (SiO ₂)				Other constituents	Total ppm	N.C. ppm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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a Field pH

h Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as $\frac{0.0}{0.00}$ except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL), or California Department of Water Resources (DWR), as indicated.

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN ACTION (NO. 7)
COLORADO RIVER BELOW PARKER DAM (STA. 55)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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o Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown. 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DMR), as indicated.

TABLE H-16
ANALYSES OF SURFACE WATER
COLORADO RIVER BA 11 REVISION (NO. 7)
COLORADO RIVER NEAR TOPOCK, ARIZONA (STA. 54)

Date and time sampled P S T	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃			Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by i																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE F-16

ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN REGION (NO. 7)
COLORADO RIVER NEAR YUMA (STA. 56)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform ^a MPN/ml	Analyzed by ¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)	Other constituents																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); Initial Cities Agricultural Consultants and Laboratories (JACL) as indicated.

TABLE B-16
ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN REGION (NO. 7)
NEW RIVER AT INTERNATIONAL BOUNDARY (STA. 57)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform MPN/ml	Analyzed by ^h							
			ppm	% Sat			equivalents per million																							
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fates (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico- (SiO ₂)				Other constituents						
1962																														
1-3 1135	486	60	8.0	79	3078	8.2 ^a	149 7.14	57 4.70	426 13.53	16 0.11	0 0.00	227 3.72	447 9.32	630 17.77	10 0.17	1.1 0.05	0.62	15					1938	60	607	421	500	6200 23000		DMR
3-6 1545	143	64	7.8	82	5618	8.2 ^a	210 10.48	128 10.52	852 37.06	43 1.10	0 0.00	270 4.42	633 13.19	1515 42.72	12 0.20	0.8 0.04	1.12	27		PO ₄ = 1.8 ppm ABS detergent 0.56		3546	63	1050	129	40	700000 240000			
5-10 0850	136	84	6.0	77	5587	8.0 ^a	225 11.23	113 9.29	860 37.41	34 0.87	0 0.00	264 4.32	724 15.03	1390 39.20	2.5 0.04	0.8 0.04	1.12	19		PO ₄ = 0.63 As = 0.00 NH ₄ = 1.3		3690	64	3690	1026	60	62000 130000			
7-3 0535	92	78	4.8	58	5869	8.1 ^a			868 37.76		0 0.00	246 4.04		1215 34.26			1.18					65	65	1010	808	25	23000 23000			
9-5 0705	150	84	4.4	56	6830	8.1 ^a	225 11.23	134 11.03	1076 46.81	18 1.23	0 0.00	239 3.92	780 16.24	1765 49.77	14.0 0.23	1.0 0.05	1.68	26		PO ₄ = 1.00		4398	67	1113	917	35	700000 700000			
11-8 0710	146	68	7.8	85	4013	7.7 ^a			580 25.23		0 0.00	210 3.44	900 25.34				0.86					64	64	704	532	50	13000 6200			

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DMR), as indicated.

TABLE 9-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN REGION (NO. 7)

NEW RIVER NEAR WESTWORLD (STA. 58)

Date and time sampled P.S.T.	Orchards in cfs	Temp in °F	Dissolved oxygen		Specific conductance at 25°C	Mineral constituents in parts per million equivalents per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃ Total ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by
			ppm	% Sol		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)				
1962																					
1-3	364	58	8.2	81	6026	221 11.53	116 9.57	940 40.85	20 0.51	0 0.00	281 4.60	732 15.25	1480 41.74	22 0.35	1.20 0.06	1.18	24				
1320																					
3-6	659	62	8.4	85	4777	202 10.08	99 8.16	720 31.32	20 0.51	0 0.00	248 4.06	669 13.93	1050 29.61	20 0.32	0.7 0.03	0.90	21				
1350																					
3-13	665 est.	59			243	149 7.44	102 8.36	679 29.56	22 0.53	0 0.00	232 3.86	655 13.65	940 26.47	5 0.08	0.81 0.04	0.76	12				
1040																					
5-10	781	76	5.6	66	4310	199 9.93	93 7.64	630 27.41	18 0.46	0 0.00	239 3.92	691 14.39	950 26.79	12 0.19	0.76 0.04	0.88	15				
1140																					
7-3	704	84	5.6	72	4378			633 27.54		0 0.00	229 3.76		945 26.65			0.98					
0900																					
9-4	636	84	5.2	67	4207	172 8.58	98 8.06	645 28.06	14 0.36	0 0.00	229 3.76	679 14.14	955 26.93	10 0.16	0.80 0.04	0.84	20				
1750																					
11-7	651	70	7.2	80.3	4496			639 27.56		0 0.00	232 3.86		975 27.50			0.84					
1750																					

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 1-14

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN REPORT (NO. 7)
SALTON SEA AT SALTON SEA STATE PARK (STA. 69a)

Date and time sampled P S T	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coli- form MPN/ml	Analyzed by ⁱ	
			ppm	%Sol			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
1962																								
1-3 1615	Sea	60	13.6	134	41190	8.3 ^a		9900 430.50		0 0.00	189 3.10		114250 401.95			7.80			78	6040	5885	< 25	0.45 0.45	DWR
2-19 1400	Sea	54			9000	7.9 ^a	1157 57.75	1064 87.25	162 4.14	0 0.00	185 3.04	9270 193.00	11240 401.75	0.0 0.00	2.0 0.10	5.50	2		75	7225	7073			USACG
3-6 1150	Sea	62	12.0	121	40210	8.2 ^a		9400 403.90		0 0.00	198 3.24		13600 383.50			7.40			78	5670	5608		0.46 0.45	DWR
5-10 1320	Sea	84	8.0	104	40450	8.1 ^a	765 38.17	964 79.27	160 4.10	0 0.00	166 2.72	7620 151.30	14000 394.90	4.3 0.07	3.4 0.15	7.90	3	PO ₄ = 0.00 As = 0.00	78	5870	5736	< 25	0.45 0.45	DWR
7-3 1100	Sea	90	7.2	99	41050			9900 437.0		0 0.00	172 2.32		14400 406.03			7.70			77	6300	6159	< 25	6.2 0.6	
9-4 1600	Sea	90	5.6	77	40436	7.9 ^a	825 41.17	933 76.69	160 4.10	0 0.00	193 3.16	7400 154.16	14700 414.54	5.0 0.08	3.1 0.15	7.80	2.4	PO ₄ = 0.04	79	5972	5814	< 25	6.2 2.3	
11-7 1505	Sea	78	10.0	120.5	44300	8.1		9725 423.0		0 0.00	190 3.12		14500 409.9			7.10				6250	5094	< 25	6.2 13	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); and Agricultural Consultants and Laboratories (USACI) as indicated.

TABLE B-15

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN AREA, (NO. 7)
WHITE WATER RIVER NEAR MECCA (STA. 686)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by	
			equivalents																
			Dissolved oxygen ppm	% Sat	Specific conductance (micromhos at 25°C)	pH	Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)							Sul- fate (SO ₄)
1962																			
1-3 1700	75 est	54			4034	7.6 ^a		672 29.23		16 0.52	322 5.23	540 15.23			1.22				DNR
2-19 1230		49			4150	8.1 ^b	29 10.95	700 30.43	0.29 11	0 0.00	332 5.52	506 14.25	23 0.37	3.2 0.16	1.20	17			U.S.A.L
3-6 1100	75 est	54			3970	7.6 ^a		663 28.84		0 0.00	253 4.14	530 14.95			0.92				
5-10 1420	90 est.	78			3611	7.9 ^a	42 15.93	612 26.62	13 0.33	0 0.00	339 5.56	462 13.03	30 0.43	3.6 0.19	1.02	26	PO ₄ = 0.6 As = 0.00		
7-3 1145	90 est.	88			3483	7.3 ^a		553 24.05		0 0.00	327 5.36	415 11.70			1.08				
9-4 1530	90 est.	90			3275	7.9 ^a	43 16.3	550 23.92	13 0.33	0 0.00	312 5.12	430 12.13	26 0.42	3.1 0.16	0.98	24	PO ₄ = 0.16		
11-7 1535	80 est.	76			3021	7.9 ^a		612 26.62		0 0.00	329 5.10	500 14.10			1.10				

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); nitrate times Agricultural Consultants and Laboratories (USACL) as indicated.

3255-141 6-61 200 30

TABLE B-16
ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN REGION (NO. 7)
WHITE WATER RIVER NEAR WHITE WATER (SDA. 68)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25° C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃		Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by i	
			ppm	% Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Barium (Ba)	Silica (SiO ₂)				Other constituents
1962																								
1-4 0815	6 est.	64	6.8	71	428	7.9 ^a	53 2.67	15 1.17	17 0.74	4.6 0.12	0 0.00	220 3.60		6 0.17			0.00							
2-19 1030	6 est.	49			418	7.6 ^a	37 1.85	17 1.15	14 0.60	4.6 0.12	0 0.00	211 3.47	22 0.46	17 0.48	0.4 —	0.9 0.05	0.05	15						
3-6 1005	6 est.	63	7.0	72	414	7.8 ^a	37 1.85	17 1.15	15 0.65	4.7 0.12	0 0.00	198 3.24	41 0.85	4 0.11	1.3 0.02	0.9 0.05	0.00	20						
5-10 1530	6 est.	68	8.0	87	431	7.3 ^a	58 2.89	11 0.91	18 0.78	4.8 0.12	0 0.00	215 3.52	45 0.93	5 0.14	1.2 0.02	0.98 0.05	0.01	18		PO ₄ = 0.00 As = 0.00	Sample Lost			
7-3 1310	6 est	70	8.8	98	428	7.5 ^a			16 0.70		0 0.00	210 3.44		3 0.08			0.00							
9-4 1230	6 est.	72	8.4	96	418	7.8 ^a	54 2.69	13 1.07	16 0.70	4.6 0.12	0 0.00	215 3.52	43 0.89	4 0.11	1.5 0.02	0.96 0.05	0.02	19		PO ₄ = 0.00				
11-7 1505	4 est	70	8.4	94.5	430	7.7 ^a			14 0.61		0 0.00	207 3.40		5 0.14			0.00							

a Field pH

b Laboratory pH.

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); United States Agricultural Consultants and Laboratories (USACL) as indicated

TABLE 16-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (NO. 8)
CHINO CREEK NEAR CHINO (STA. 86)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform ^h MPN/ml	Analyzed by
						equivalents												Silico (SiO ₂)	Other constituents			
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							
1962																						
1-2 0900	1 1/4 est.	46	12.0	1007	8.4 ^a		93 4.04		0 0.00	466 7.64		60 1.69			0.21			39	318	0	<25	620 230
2-14 0915	5 est.	54	7.6	881	7.4 ^a		78 3.39	15 0.33	16 0.56	323 5.30	83 1.72	48 1.35	42 0.67	0.1 0.01	0.19	1	PO ₄ = 8 ppm ABs detergents 0.33	36	299	7	25	7000 2400
3-9 0830	5 est.	56	6.4	997	7.5		84 3.65	15 0.33	0 0.00	417 6.84	90 1.87	55 1.55	1.6 0.02	0.6 0.03	0.22	26	PO ₄ = 6.3 ppm ABs detergents 1.1	36	330	0	75	2400 620
4-2 0910	1 est.	60	10.4	936	7.4 ^a		84 3.65		0 0.00	427 7.00		51 1.44			0.21			35	332	0		2300 6200
5-7 1240	1 est.	78	6.4	827	7.6 ^a		83 3.61	15 0.33	0 0.00	366 6.00	30 0.62	55 1.55	24 0.33	1.04 0.05	0.22	35	As = 0.00 PO ₄ = 21 NH ₄ = 3.2	42	225	0	60	620 620
6-4 0815	1 est	62	5.6	859	7.5 ^a		83 3.61		0 0.00	373 6.12		63 1.78			0.22		PO ₄ = 10 ABs = 0.76	42	251	0	<25	230 620
7-5 0850	Dry No flow																					
8-1 0730	Dry No flow																					
9-4 0740	Dry No flow																					
10-4 0755	Dry No flow																					
11-7 0905	Dry No flow																					
12-3 0925	Dry No flow																					

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.
0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP), City of Los Angeles, Department of Public Health (LADPH), City of Long Beach, Department of Public Health (LBPH); Teminon Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

3255-0-48 6-61 230 380

TABLE B-17
ANALYSES OF SURFACE WATER
SANTA ANA REGION (NO. 8)
LAKE MICHIGAN AREA (WEITING) (STA. 89)

Data and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃ ppm		Turbidity in ppm	Coliform MPN/ml	Analyzed by			
			ppm	% Sat		Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)			Boron (B)	Silica (SiO ₂)				Other constituents		
1962																									
1-2 1100	Dry lake																								
3-16 1400		64	10.4	109	28660	23 11.15	19 11.57	7850 341.40	107 2.74	139 4.64	625 10.24	4950 103.10	8100 223.10	20 0.33	2.9 0.15	7.2	1		21676	99	136	0	40	<0.045	DWR
5-8 0850	Dry lake																								
7-2 1135	Dry lake																								
9-6 1515	Dry lake																								
11-8 1515	Dry lake																								

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE F-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (NO. 8)
SANTA ANA RIVER NEAR ARLINGTON (STA. 51)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (microhm/cm at 25°C)	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ ppm	Turbidity in ppm	Coliform MPN/ml	Analyzed by i			
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)							Boron (B)	Silica (SiO ₂)	Other constituents
1962																								
1-10 1335	11	62	9.6	98	1052	5.69	1.97	3.39	5.2	0.00	339	110	99	35	0.76	0.15	27	651	30	383	105	25	230	DMR
2-10 1200	157	58	-	-	656	67	1.15	2.10	7	0.00	205	70	54	14	0.40	0.21	19	624	32	370	109	80	620	DMR
2-14 1100	142	64	7.6	73	1000	5.34	2.06	5.13	5.1	0.00	318	106	99	30	0.60	0.14	22	470	31	206	37	3300	23	TTL
3-9 1100	24	54	9.6	100	1040	5.24	2.40	3.31	4.7	0.00	321	119	104	28	0.60	0.12	28	657	30	382	119	<25	240	DMR
4-2 1120	23	54	8.4	88	1045	5.94	1.97	3.70	5.0	0.00	342	139	103	23	0.74	0.14	27	690	32	396	116	<25	23	DMR
5-2 1015	26	58	8.4	92	852	4.94	1.81	3.09	4.4	0.00	271	115	100	22	0.64	0.14	25	602	31	337	115	<25	62	DMR
6-4 1030	11	58	8.8	97	1006	5.04	2.04	3.44	4.5	0.00	298	111	98	27	0.74	0.11	28	672	32	354	110	<25	13	6.2
7-5 1045	27	72	8.4	95	1039	5.05	2.3	3.22	4.6	0.00	301	111	98	30	0.62	0.15	25	608	31	358	111	<25	62	DMR
8-1 0920	23	70	9.6	106	1032	4.89	2.14	3.31	4.6	0.00	273	110	101	21	0.80	0.14	27	650	32	339	115	<25	240	DMR
9-12 0930	26	58	9.2	100	1019	5.79	1.81	3.31	4.5	0.00	322	113	101	22	0.58	0.15	28	620	30	379	115	<25	60	DMR
10-4 0845	18.5	56	8.0	85	1024	5.79	1.81	3.31	5.12	0.00	318	113	98	27	0.58	0.15	28	620	30	379	115	<25	60	DMR
11-7 1110	29	56	8.4	90.0	1104	5.54	1.13	4.00	4.9	0.00	320	111	98	27	0.8	0.10	27	672	29	384	123	<25	62	DMR
12-3 1115	24	56	8.8	94	1030	5.39	2.07	3.05	5.13	0.00	311	113	94	21	0.7	0.10	27	627	29	373	118	<25	62	6.2

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBOPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated

TABLE B-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (NO. 8)
SANTA ANA RIVER NEAR MANTONE (STA. 51b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhmhos at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent Sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ			
			ppm	%Sat		Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	equivalents									Silica (SiO ₂)	Other constituents	
													Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)									Boron (B)
1952																								
1-4 1020	16	48	10.8	5	290	7.8 ^a		20 0.87	0	144 2.36		6 0.17			0.07		30	101	0	<25	2.3 2.3	DMR		
2-14 1245	100	52	9.2	84	229	8.0 ^a	24 1.00	16 0.46	0	109 1.73	18 0.37	6 0.17	3.2 0.05	0.4 0.02	0.05	12	30	83	0	<25	6.2 2.1			
3-9 1245	45 est.	48	10.8	93	247	7.6 ^a		15 0.65	0	110 1.80		4 0.11			0.04		27	87	0	<25	<0.45 2.3			
4-2 1300	80	50	10.0	88	201	7.9 ^a		14 0.61	0	107 1.76		7 0.20			0.04		29	75	0	<25	0.6 0.6			
5-7 0900	80	56	10.0	95	197	7.7 ^a	22 1.10	14 0.61	0	102 1.63	6.7 0.14	5 0.14	1.0 0.01	0.34 0.013	0.06	12	30	69	0	<25	1.3 6.2			
6-4 1215	41	56	10.0	95	224	7.9 ^a		15 0.65	0	111 1.82		4 0.11			0.00		28	82	0	<25	2.3 6.2			
7-5 1155	41 est.	64	9.6	100	240	7.8 ^a		15 0.65	0	113 1.86		3 0.03			0.05		28	85	0	<25	23 6.2			
8-1 1035	27	64	9.6	100	250	7.8 ^a		16 0.70	4.8 0.16	107 1.76		6 0.17			0.05		29	85	0	<25	23 23			
9-12 1035	26	60	9.2	92	243	7.9 ^a	25 1.25	15 0.65	0	121 1.96	17 0.36	4 0.11	0.0 0.00	0.5 0.03	0.05	16	25	93	0	<25	2.3 13			
10-4 1020	27	56	9.6	91	243	7.9 ^a		14 0.61	0	118 1.94		5 0.14			0.06		25	92	0	<25	6.2 2.3			
11-14 1345	26	54	9.2	85.4	198	7.9 ^a		15 0.65	0	122 2.00		6 0.17			0.05		26	94	0	<25	1.3 0.6			
12-3 1235	26 est.	50	10.8	85	253	8.0 ^a		15 0.65	0	124 2.04		4 0.11			0.05		26	92	0	<25	0.6 0.46			

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE R-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (NO. 8)

SANTA ANA RIVER NEAR MORCO (STA. 51e)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent soli- dum	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by		
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)
1962																								
50 est.		56	6.4	61	1203	7.3 ^a	91 4.54	25 2.08	109 4.74	7.2 0.18	0 0.00	325 5.32	114 2.37	130 3.67	40 0.64	1.0 0.05	0.43			40	351	85	25	2300 230
100 est.		60	6.0	59	1067	7.4 ^a	101 5.04	25 2.04	97 4.22	8.3 0.21	0 0.00	296 4.86	125 2.61	114 3.21	40 0.64	1.0 0.05	0.33	25		43	331	80	30	70000 70000
100 est.		60	5.6	55	1174	7.3 ^a	101 5.04	25 2.04	109 4.74	8.3 0.21	0 0.00	298 4.88	125 2.61	131 3.69	40 0.15	1.0 0.05	0.47	26		40	354	110	50	2300 2300
45 est.		60	5.0	50	1120	7.4 ^a	100 4.99	25 2.06	110 4.79	7.6 0.19	0 0.00	300 4.92	143 2.98	126 3.55	38 0.61	0.96 0.05	0.54	24		40	354	108	50	620 1300
30 est.		74	4.4	52	1134	7.4 ^a	111 5.54	20 1.64	100 4.35	7.0 0.18	0 0.00	310 5.08	115 2.40	123 3.47	26 0.42	0.88 0.046	0.48	22		37	359	105	<25	500 230
30 est.		68	4.4	48	1083	7.3			100 4.35		0 0.00	298 4.88		116 3.27			0.40			39	337	93	<25	230 620
20 est.		76	4.8	57	1221	7.4 ^a			112 4.87		0 0.00	301 4.94		145 4.09			0.32			40	361	114	<25	620 230
20 est.		70	6.4	71	1104	7.4 ^a			102 4.44		0 0.00	293 4.80		117 3.30			0.44			41	320	80	30	620 2400
30 est.		68	5.2	57	1083	7.3 ^a	88 4.39	24 1.97	105 4.57	2.0 0.23	0 0.00	298 4.88	113 2.30	119 3.36	22 0.36	0.86 0.05	0.52	20		41	318	74	<25	130 600
25 est.		68	4.4	48	1154	7.3 ^a			106 4.61		0 0.00	312 5.12		131 3.69			0.50			40	350	94	<25	230 230
30 est.		64	4.8	50	1196	7.3 ^a	97 4.84	27 2.18	105 4.57	2.1 0.23	0 0.00	310 5.08	118 2.46	128 3.61	20 0.33	1.1 0.06	0.32	34		41	351	97	<25	620 620
25 est.		56	5.6	53	1174	7.3 ^a			109 4.74		0 0.00	316 5.18		127 3.58			0.34			40	356	97	<25	620 230

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE E-17

ANALYSES OF SURFACE WATER

SANTA ANA RIVER (St. 8)
SANTA ANA RIVER BELOW PRADO DAM (STA. 51a)

Date and time sampled P.S.T.	Orischarge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmhos at 25°C)	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent solids in ppm	Hardness as CaCO ₃ Total ppm	Tur- bidity in ppm	Coliform MPN/ml	Analyzed by	
					equivalents																
					Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Baron (B)
1962																					
1-2 0940	51	54	5.2	1105	102 5.09	25 2.05	97 4.22	6.3 0.16	0 0.00	333 5.46	117 2.44	120 3.38	25 0.41	0.78 0.04	0.31	27	PO ₄ = 0.25 ABS detergents 0.58	37	357	84	DWR
2-9 1145	571	56	-	615	51 2.54	11 0.95	50 2.19	19 0.50	0 0.00	170 2.79	78 1.62	56 1.56	2 0.04	0.35 0.02	0.08	17	ABS detergents 0.48	38	355	87	DWR
2-14 0945	131	60	6.4	1084	102 5.09	24 2.01	97 4.22	10 0.26	12 0.40	302 4.96	120 2.51	126 3.55	12 0.20	0.70 0.04	0.27	25	PO ₄ = 4.0 ABS detergents 0.28	36	170	30	TTL
3-9 0900	70	56	64	1321	104 5.19	29 2.35	102 4.44	8.8 0.23	0 0.00	329 5.40	128 2.66	125 3.53	25 0.40	0.90 0.05	0.25	28	PO ₄ = 5.4 ABS detergents 0.42	37	377	107	DWR
4-2 0945	66	60	5.6	1089	107 5.34	25 2.06	100 4.35	6.7 0.17	0 0.00	339 5.56	141 2.93	119 3.36	12 0.20	0.82 0.04	0.40	26	PO ₄ = 4.0 ABS detergents 0.44	36	371	93	DWR
5-7 1200	65	74	7.6	1122	111 5.54	29 2.35	87 3.78	5.1 0.13	0 0.00	322 5.28	118 2.45	121 3.41	14 0.23	0.70 0.04	0.28	27	PO ₄ = 3.0 ABS = 0.3 As = 0.00	32	374	110	DWR
6-4 0900	35	64	7.2	1080	105 5.24	24 1.96	90 3.92	5.5 0.14	0 0.00	322 5.28	111 2.31	113 3.19	27 0.13	0.78 0.04	0.28	29	PO ₄ = 4.0 ABS = 0.33	35	361	97	DWR
7-5 0910	25	70	8.4	1091	109 5.44	23 1.90	85 3.70	5.7 0.15	0 0.00	328 5.38	110 2.30	115 3.24	19 0.30	0.61 0.03	0.30	27	PO ₄ = 3.6 ABS = 0.24	33	367	98	DWR
8-1 0800	20	64	8.4	1092	102 5.09	25 2.06	88 3.83	5.4 0.14	24 0.86	276 4.52	105 2.19	116 3.27	12 0.19	0.80 0.04	0.31	28	PO ₄ = 1.5 ABS = 0.34	34	356	90	DWR
9-4 0830	17	66	8.0	1064	106 5.29	24 1.97	90 3.92	5.0 0.13	0 0.00	327 5.36	111 2.31	117 3.30	12 0.19	0.60 0.03	0.32	28	PO ₄ = 2.00 ABS = 0.36 As = 0.00	35	363	95	DWR
10-4 0720	42	66	8.0	1063	107 5.37	24 1.99	87 3.78	5.0 0.13	0 0.00	320 5.24	120 2.38	120 3.38	20 0.33	0.8 0.04	0.29	29	PO ₄ = 1.30 ABS = 0.30	34	367	105	DWR
11-7 0925	38	60	8.4	1087	101 5.04	25 2.02	92 4.06	6.4 0.16	0 0.00	316 5.18	108 2.25	116 3.27	20 0.33	0.8 0.04	0.27	29	PO ₄ = 3.6 ABS = 0.32	36	353	94	DWR
12-3 0945	40	56	9.2	1099	104 5.19	24 1.99	91 3.96	6.1 0.16	0 0.00	316 5.18	111 2.31	116 3.27	24 0.39	0.7 0.04	0.31	32	NH ₄ = 0 PO ₄ = 3.6 ABS = 0.35	36	359	100	DWR

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{VI}), reported here as 0.0 except as shown

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), Metropolitan Water District of Southern California (MWD), Los Angeles Department of Water and Power (LADWP), City of Los Angeles, Department of Public Health (LADPH), City of Long Beach, Department of Public Health (LBDPH), Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated

ANALYSES OF SURFACE WATER

SANTA ANA REGION (NO. 8)

ANALYSES OF SURFACE WATER

Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Water Resources (DWR), San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPDH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (NO. 8)
WARM CREEK NEAR COLTON (STA. 50b) (continued)

Date and time sampled P.S.T	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (microhmals at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ⁱ	
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potash- ium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlor- ide (Cl)	Ni- troite (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents
6-7 1230		80	8.2	101	7.3 ^a	56 2.79	18 1.19	126 5.43	14 0.36	0 0.00	215 3.32	64 1.34	142 4.00	82 1.32	1.3 0.07	0.59	34	PO ₄ = 35 ABS = 5.4	214	38	<25	6.2 6.2	DWR
6-7 1600		70	8.2	92	7.4 ^a																		
7-2 0715		72	7.8	89	7.4 ^a																		
7-2 1230		82	8.0	101	8.0 ^a	50 2.50	19 1.54	79 3.44	14 0.36	0 0.00	137 2.24	75 1.56	75 2.12	104 1.63	0.8 0.04	0.49	29	PO ₄ = 36 ABS = 1.73	202	90	<25	23 62	
7-2 1615		80	8.2	101	8.2 ^a																		
8-7 0715	3	74	8.6	100	7.5 ^a																		
8-7 1245	11	84	9.0	118	7.3 ^a	60 2.99	22 0.76	119 5.10	13 0.33	0 0.00	195 3.20	77 1.61	118 3.33	71 1.15	1.16 0.06	1.00	33	NH ₄ = 4.3; PO ₄ = 28 ABS = 4.5	187	27	<25	23 2.3	
8-7 1915	8	82	6.4	81	7.4 ^a																		
9-4 0715	3	72	7.6	87	7.2 ^a																		
9-4 1150	12	80	8.4	104	7.3 ^a	43 2.15	21 1.73	78 3.39	13 0.33	0 0.00	181 2.96	66 1.37	67 1.59	83 1.34	0.78 0.04	0.30	32	NH ₄ = 2.0; As = 0.00 PO ₄ = 28; ABS = 3.6	195	47	<25	2.3 62	
9-4 1530	11	80	7.8	96	7.3 ^a																		
10-2 0715	3	77	7.0	84	7.5 ^a																		
10-2 1155	11	81	9.6	118	7.4 ^a	44 2.19	20 1.63	122 5.31	13 0.33	0 0.00	170 2.78	70 1.46	118 3.33	82 1.33	1.3 0.07	0.57	34	PO ₄ = 23 ABS = 2.0	191	52	<25	>700 >700	
10-2	10	77	6.2	74	7.5 ^a																		
11-7 0720	2.3	62	7.7	78	7.6 ^a																		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Division of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE D-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (NO. 8)
WARM CREEK NEAR COLTON (STA. 50b) (continued)

Date and time sampled P S T	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	%Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per cent sodium	Hardness as CaCO ₃		Tur- bidity in ppm	Coliform MPN/ml	Analyzed by			
							equivalents												ppm							
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents		
11-7 1220	10	78	7.5	90	1050	7.5 ^a	53 2.64	19 1.60	120 5.22	14 0.36	0 0.00	188 3.08	71 1.43	133 3.75	87 1.40	1.3 0.07	0.64	35	PO ₄ = 28 AB8 = 3.1	663	55	212	58	<25	23	DMR
11-7 1610	10	76	6.9	81		7.4 ^b																				
12-10 0720		62	8.6	88		7.4 ^b																				
12-10 1215		66	8.6	92	849	8.6 ^b	50 2.50	18 1.74	81 3.52	13 0.33	0 0.00	209 3.42	62 1.29	65 1.33	78 1.26	0.9 0.05	0.34	28	AB8 = 4.7 NH ₄ = 270.50	503	47	197	26	<25	0.6 2.3	
12-10 1600		66	7.3	78		7.3 ^b																				

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS), United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

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TABLE 4-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (NO. 1)

WATER QUALITY SURVEY (1962-1963) (FA, 5 e)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance microhm/cm at 25°C	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Percent sodium in ppm	Hardness as CaCO ₃ in ppm	Turbidity in ppm	Coliform ^b MPN/ml	Analyzed by ⁱ
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Boron (B)	Silica (SiO ₂)	Other constituents			
1962																					
1000	Dry																				
2-14	No flow																				
1200	1 est	53	10.0	103	7.4 ^a	11	3	5	1.8	0	46	2.9	5	2.9	0.0	0.04	5	PO ₄ = 0.6 AB8 = 0.03			
3-5	Dry																				
1000	No flow																				
4-12	Dry																				
1000	No flow																				
5-2	Dry																				
1000	No flow																				
6-7	Dry																				
1000	No flow																				
7-2	Dry																				
1000	No flow																				
8-7	Dry																				
1000	No flow																				
9-4	Dry																				
1000	No flow																				
10-2	Dry																				
1000	No flow																				
11-7	Dry																				
1000	No flow																				
12-3	Dry																				
1215	No flow																				

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as $\frac{0.0}{0.00}$ except as shown

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 3-18

ANALYSES OF SURFACE WATER

SAN DIEGO REGION (NO. 9)
ESCONDIDO CREEK AT HARMONY GROVE (STA. 63)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micro mhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by ¹		
			ppm	% Sat			equivalents																		
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silica (SiO ₂)				Other constituents	
1962																									
1-2 1430	1-1/2 est	56	5.2	50	1852	7.0 ^A		232 10.09		0 0.00	112 1.84		305 8.60			0.55					386	294	<25	230 230	DMR
3-8 0830	2 est.	63	5.4	56	1726	7.2 ^A	84 4.19	213 9.27	13 0.33	0 0.00	164 3.18	226 4.71	295 8.32	45 0.73	0.5 0.02	0.53	24	PO ₄ = 16 ABS detergents 1.8		380	221	<25	6. 23		
5-9 1200	1 est.	74	7.2	83	2110	5.5 ^A	109 5.44	270 11.75	10 0.25	0 0.00	290 4.76	292 6.03	350 9.87	9.9 0.16	0.86 0.045	0.72	27	PO ₄ = 21; As = 0.00 ABS = 3.0; NH ₄ = 1.3		402	164	50	13 62		
7-2 1210	1 est	74	9.2	108	1840	7.2 ^A		225 9.79		0 0.00	188 3.03		272 7.67			0.61		1.5		377	223	<25	62 700		
9-6 1300	2 est	6	5.2	61	1947	7.3 ^A	80 3.99	268 11.66	19 0.19	0 0.00	234 3.84	321 6.63	362 10.21	24 0.39	1.36 0.07	0.60	23	NH ₄ = 2 PO ₄ = 20 ABS = 3.5		390	198	<25	230 620		
11-8 1255	2 est	72	4.4	50	2099	7.2 ^A		253 11.00		0 0.00	271 4.44		340 9.59					PO ₄ = 39.0 ABS = 3.3		411	189	<25	230 620		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc (TTL); or California Department of Water Resources (DWR); as indicated.

TABLE B-18
ANALYSES OF SURFACE WATER
SAN DIEGO REGION (NO. 9)
FORESTER CREEK AT MISSION GORGE ROAD (STA. 65a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by					
			ppm	% Sat			equivalents per million																				
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Barium (Ba)	Silico (SiO ₂)	Other constituents		
1962																											
1-3 0840	3 est.	52	5.8	52	2096	7.4 ^a	37 1.85	17 1.41	245 10.66	0 0.00	360 5.90	81 1.68	290 8.9		0.63												
3-7 1300	3 est	61	6.0	60	666	7.4 ^a	37 1.85	17 1.41	66 2.87	0 0.00	72 1.18	81 1.68	103 3.05	14 0.23	0.3 0.01	0.10	10	PO ₄ = 1.0 ABS detergents 0.39	429	47	163	104	500	2300	13000		DWR
5-9 1530	Dry No flow																										
7-2 1425	Dry No flow																										
9-6 0850	Dry No flow																										
11-8 1105	Dry No flow																										

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE 19
ANALYSES OF SURFACE WATER
SAN DIEGO REGION (NO. 9)
SAN DIEGO RIVER AT MISSION GORGE ROAD (STA. 65c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by i				
			ppm	% Sat			equivalents																				
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Boron (B)	Silico (SiO ₂)				Other constituents			
1962																											
7-2 1355	8.0	82	7.6	94	2132	7.3 ^b	90 4.49	148 3.91	269 11.70	18 0.46	0 0.00	228 3.74	337 7.03	317 8.94	132 2.13	0.66 0.03	0.66	23		NH ₄ = 7.2 PO ₄ = 38 ABS = 67.0	1280	54	420	223	<25	2300 230	DWR
9-6 0915	6 est	76	3.6	43	2415	7.4 ^a	92 4.59	146 3.73	318 13.33	18 0.46	0 0.00	376 6.16	346 7.20	394 11.11	5.0 0.03	1.48 0.03	0.64	22		NH ₄ = 41 PO ₄ = 22 ABS = 51.6	1380	55	420	112	<25	60 1,000	
11-3 1005	6 est	70	5.6	62	2157	7.3 ^a	87 4.34	147 3.84	253 11.31	18 0.46	0 0.00	307 5.04	333 6.94	324 9.13	66 1.07	1.1 0.05	0.74	39		NH ₄ = 22/1.23 PO ₄ = 36 ABS = 47.8	1275	53	409	157	<25	5.6 62.4	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown 0.00

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCECD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-16
ANALYSES OF SURFACE WATER
SAN DIEGO REGION (NO. 3)
SAN DIEGO RIVER AT OLD MISSION DAM (STA. 65)

Date and time sampled P S T	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in equivalents per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃ Total N C ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by		
						Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silica (SiO ₂)
1962																							
1-3 0740	15 est.	52	3.6	2180	7.3 ^a		272 11.38		0	321 5.26		333 9.39			0.57			61	381	118	<25	230 650	DWR
2-20 1240	20 est	50		540	7.4 ^b	16 0.66	57 2.47	10 0.26	0	86 1.42	70 1.46	85 2.40	11 0.13	0.4 0.02	0.20	13		45	146	75	Tur- bid		
3-7 1330	20 est	52	4.0	1529	7.5 ^a	41 3.54	192 8.35	7.0 0.18	0	188 3.08	226 4.71	261 7.36	25 0.10	0.5 0.02	0.36	23		55	346	192	100	23	DWR
5-9 1500	1/2 est.	50	8.8	2358	8.2 ^a	38 3.12	306 13.31	7.6 0.19	0	364 5.96	218 4.54	460 12.97	5.0 0.08	0.76 0.04	0.48	16		58	471	173	90	62 240	DWR
7-2 1415	No inflow Pond not sampled																						
9-6 0900	No inflow Pond not sampled																						
11-8 0955	No inflow Pond not sampled																						

a Field pH.

b Laboratory pH.

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); United States Agricultural Consultants and Laboratories (USCAL) as indicated.

TABLE P-18

ANALYSES OF SURFACE WATER

SAN DIEGO REGION (NO. 9)
SAN DIEGUITO RIVER NEAR SAN PASQUAL (STA. 64)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million								Total dissolved solids in ppm	Percent sodium	Hardness as CaCO ₃ Total ppm	N.C. ppm	Turbidity in ppm	Coliform ^h MPN/ml	Analyzed by ⁱ
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Barium (Ba)	Silica (SiO ₂)			
1962																			
1-2	Dry																		
1350	No flow																		
3-8	Dry																		
0740	No flow																		
5-9	Dry																		
1255	No flow																		
7-2	Dry																		
1300	No flow																		
9-6	Dry																		
1220	No flow																		
11-8	Dry																		
1240	No flow																		

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁺⁶), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-18
ANALYSES OF SURFACE WATER
SAN DIEGO REGION (NO. 9)
SAN LUIS REY RIVER NEAR PALA (STA. 62)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhm/cm at 25°C)	pH	Mineral constituents in parts per million										Total dissolved solids in ppm	Per- cent - sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by	
			ppm	%Sat			equivalents per million																	
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)			Barium (Ba)	Silica (SiO ₂)				Other constituents
1962																								
1-2 1345	Dry No flow																							
2-20 1430	1/20 est	50	- -	- -	785	7.7 ^b	73 3.64	27 2.24	57 2.47	0.15 6.0	0 0.00	155 2.55	198 4.23	55 1.56	0 0.00	0.3 0.02	0.05	33			610	29	166 clear	USACL
3-8 0925	Dry No flow																							
5-9 1110	Dry No flow																							
7-2 1120	Dry No flow																							
9-6 1345	Dry No flow																							
11-8 1345	Dry No flow																							

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); United States Agricultural Consultants and Laboratories (USACL) as indicated

TABLE 9-12

ANALYSES OF SURFACE WATER

SAN DIEGO REGION (No. 9)
SANTA MARGARITA RIVER NEAR FALLBROOK (STA. 51c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million												Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ ppm		Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by i		
			ppm	% Sat			equivalents per million																				
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluor- ide (F)	Boron (B)	Silico (SiO ₂)			Other constituents						
1962																											
1-2 1230	10 est.	50	9.2	82	1199	7.9 ^A		128 5.57		13 0.44	316 5.18		144 4.06			0.22						45	337	56	<25	6.2 6.2	DMR
3-8 1015	8.6	54	9.0	64	1167	7.5 ^A		120 5.22		17 0.56	246 4.04		151 4.26			0.17						144	337	107	<25	2.3 6.2	
5-9 1010	3.3	70	7.2	9	1277	7.8 ^A		27 2.22	3.2 0.08	0 0.00	364 5.96	142 2.96	158 4.46	0 0.00	0.64 0.03	0.20	32	PO ₄ = 0.7 As = 0.00				142	373	80	<25	6.2 5	
7-2 1130	1/4 est.	80	9.6	118	1323	7.8 ^A		136 5.92		17 0.56	351 5.76		167 4.77			0.25						144	379	63	30		
9-6 1420	No inflow Pond not sampled																										
11-8	6 est.	60	8.0	79.5		7.7 ^A		31 2.51	4.3 0.11	0 0.00	354 5.80	116 2.42	140 3.95	5.6 0.09	0.8 0.04	0.21	34	PO ₄ = 1.8				39	340	50	<25	13	

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in ppm.

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.

e Derived from conductivity vs TDS curves.

f Determined by addition of analyzed constituents.

g Gravimetric determination.

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBFCFD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBDPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

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TABLE 6-12
ANALYSES OF SURFACE WATER
SAN DIEGO REGION (NO. 9)
SPRING VALLEY CREEK NEAR LA PRESSA (STA. 65b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (microhm-cm at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium in ppm	Hardness as CaCO ₃ Total ppm	Tur- bid- ity in ppm	Coliform MPN/ml	Analyzed by		
			ppm	% Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)							Boron (B)	Silico (SiO ₂)
1962																								
1-2 1730	4 est.	68	6.4	70	2579	7.0 ^a	94 4.69	60 4.93	348 15.14	15 0.33	0 0.00	366 6.00	379 7.39	422 11.90	0.6 0.01	3.9 0.21	1.07	28	61	481	181	90	<45 <45	DMR
3-7 1500	3 est	67	6.0	64	1116	7.4 ^a	53 2.64	27 2.24	133 5.79	4.0 0.10	0 0.00	120 1.95	132 2.75	194 5.47	55 0.23	0.3 0.01	0.17	0	54	244	146	700	2400 7000	
5-9 1445	3 est	82	7.2	91	2899	7.3 ^b	159 7.93	43 3.53	371 16.14	14 0.36	0 0.00	381 6.24	411 8.57	520 11.66	5.6 0.09	0.68 0.035	1.08	24	55	575	263	60	<45 <45	
7-2 1535	3 est	80	8.4	102	2503	7.2 ^b			347 15.09		0 0.00	301 5.03		391 11.03			1.33		62	462	208	35	6 6	
9-6 1045	3 est	82	8.8	110	2865	7.5 ^b	105 5.24	71 5.84	365 15.83	18 0.46	0 0.00	476 7.80	403 8.40	508 11.33	2.5 0.04	0.42 0.02	0.64	28	52	551	161	75	>700 >700	
11-8 1105	3 est	76	9.6	113	2904	7.3 ^b	113 5.64	79 5.76	334 14.53	17 0.44	0 0.00	445 6.80	378 7.83	504 11.21	0 0.00	0.6 0.03	0.85	48	50	570	230	100	230 230	

a Field pH
b Laboratory pH
c Sum of calcium and magnesium in ppm
d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr⁶⁺), reported here as 0.0 except as shown.
e Derived from conductivity vs TDS curves
f Determined by addition of analyzed constituents
g Gravimetric determination
h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.
i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); Son Bernardino County Flood Control District (SBCFCD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR); as indicated.

ANALYSES OF SURFACE WATER

SAN DIEGO REGION (NO. 9)
TTA JUANA RIVER AT INTERNATIONAL BOUNDARY (STA. 66)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	% Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million										Total dis- solved solids in ppm	Per- cent sod- ium	Hardness as CaCO ₃		Tur- bid- ity in ppm	Caliform ^h MPN/ml	Analyzed by i
							equivalents per million												Other constituents				
							Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO ₃)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Ni- trate (NO ₃)	Fluo- ride (F)				Boron (B)			
1962																							
1-2 1700	Dry No flow																						
3-7 1600	Dry No flow																						
5-9 1330	Dry No flow																						
7-2 1600	Dry No flow																						
9-6 1125	Dry No flow																						
11-8 1140	Dry No flow																						

a Field pH

b Laboratory pH

c Sum of calcium and magnesium in epm

d Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{VI}), reported here as .00 except as shown .00

e Derived from conductivity vs. TDS curves

f Determined by addition of analyzed constituents

g Gravimetric determination

h Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by California Department of Public Health, Division of Laboratories, or United States Public Health Service.

i Mineral analyses made by United States Geological Survey, Quality of Water Branch (USGS); United States Department of the Interior, Bureau of Reclamation (USBR); United States Public Health Service (USPHS); San Bernardino County Flood Control District (SBCECD); Metropolitan Water District of Southern California (MWD); Los Angeles Department of Water and Power (LADWP); City of Los Angeles, Department of Public Health (LADPH); City of Long Beach, Department of Public Health (LBPH); Terminal Testing Laboratories, Inc. (TTL); or California Department of Water Resources (DWR), as indicated.

TABLE B-19
SPECTROGRAPHIC ANALYSES OF SURFACE WATER
NORTH COASTAL REGION (No. 1)

Station	Sta No	Date	Constituents in parts per billion																
			Alumi- num (Al)	Beryl- lum (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chro- mium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germa- nium (Ge)	Manga- nese (Mn)	Molyb- denum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
Klamath River below Iron Gate Dam	1f	5/16 9/13	12 3.3*	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 20	5.0* 3.3*	5.0* 3.3*	20 28	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	1.4 0.67*	9.5 3.3*	2.0* 1.3*	1.0* 8.7	20* 13*
	2	5/8 9/4	5.0 3.3*	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	13 12	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	3.4 2.6	5.0* 3.3*	2.0* 1.3*	1.4 2.7	20* 13*
	2b	5/16 9/13	9.4 3.3*	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	70 3.3*	5.0* 3.3*	5.0* 3.3*	15 10	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	4.9 1.7	12 3.3*	2.0* 1.3*	1.0 4.0	20* 13*
	3	5/10 9/7	6.5 8.0	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 5.1	5.0* 3.3*	5.0* 3.3*	12 8.0	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	2.8 3.3	5.0* 3.3*	2.0* 1.3*	1.9 2.1	20* 13*
Trinity River near Hoopa	4	5/8 9/4	5.6 21	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 16	5.0* 3.3*	5.0* 3.3*	5.0 10	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	1.4 2.6	5.0* 3.3*	2.0* 1.3*	1.1 0.67*	20* 13*
Eel River, Middle Fork at Dos Rios	5c	5/10 9/12	8.4 16	1.0* 1.3*	1.0* 2.5	5.0* 3.3*	5.0* 19	5.0* 3.3*	5.0* 3.3*	14 13	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 1.6	1.4 2.6	9.5 3.3*	2.0* 1.3*	1.0* 0.67*	20* 13*
Eel River at Scotia	6	5/8 9/6	123 9.3	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	20 6.0	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	37 1.9	5.0* 3.3*	2.0* 1.3*	1.0* 0.67*	20* 13*
Mad River near Arcata	6a	5/10 9/5	21 7.3	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	39 9.3	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	1.8 1.5	5.0* 3.3*	2.7 1.3*	1.0* 0.67*	20* 13*
Russian River at Querneville	10	5/8 9/11	5.2 3.6	1.0* 1.3*	1.0* 4.3	5.0* 3.3*	5.0* 70	5.0* 3.3*	5.0* 3.3*	3.2 23	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67**	1.5 4.4	5.0* 3.3*	2.0* 1.3*	1.7 0.67*	20* 13*

* Results are less than the figure listed.

** Results are equal to but slightly less than the figure listed.

TABLE B-20
SPECTROGRAPHIC ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (No. 2)

Station	Sta No	Date	Constituents in parts per billion																
			Alumi- num (Al)	Beryl- lium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chro- mium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germa- nium (Ge)	Manga- nese (Mn)	Molyb- denum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
Napa River near St. Helena	72	5/8 9/13	3.8 5.4	1.0* 1.3*	1.0* 1.3*	5.0* 3.3*	5.0* 22	5.0* 3.3*	5.0* 3.3*	6.6 26	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.80	1.6 8.7	5.0* 3.3*	2.0* 1.3*	2.4 0.67*	20* 13*
Alameda Creek near Niles	73	5/4 9/6	4.2 101	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0 207	5.0 207	20* 13*	1.0* 0.67*	5.0* 70	1.0* 0.67*	1.1 0.67*	5.0* 3.3*	2.0* 1.3*	1.4 6.0	20* 13*
Coyote Creek near Madrone	82	5/2	22	1.0*	1.0*	12	5.0*	5.0*	50	50	20*	1.0*	5.0*	1.0*	3.8	5.0*	2.0*	1.2	20*

* Results are less than the figure listed.

TABLE B-21
SPECTROGRAPHIC ANALYSES OF SURFACE WATER
CENTRAL COASTAL REGION (No. 3)

Station	Sta No	Date	Constituents in parts per billion																
			Alumi- num (Al)	Beryl- lium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chro- mium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germa- nium (Ge)	Manga- nese (Mn)	Molyb- denum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
Salinas River near Spreckels	43	5/3 9/6	4.0 8.7	1.0* 1.3*	1.0* 1.2	5.0* 3.3*	5.0* 20	5.0* 3.3*	12 33	10 30	20* 13*	1.0* 0.67*	5.0* 103	6.8 8.0	5.8 10	8.3 3.3*	2.0* 1.3*	3.8 1.2	20* 13*
Nacimiento River near San Miguel	43b	9/5	100***	1.3*	0.67*	3.3*	3.3*	3.3*	3.3*	237	13*	0.67*	3.3*	0.67*	3.9	3.3*	1.3*	0.67*	13*
Santa Ynez River near Solvang	45a	5/1	10	1.0*	1.0*	5.0*	5.0*	5.0*	16	4.0	20*	1.0*	5.0*	1.7	1.6	5.0*	2.0*	1.8	20*
Pajaro River near Chittenden	77	5/3 9/5	8.6 3.3*	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 13	5.0* 3.3*	5.0* 3.3*	9.6 4.9	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 2.6	4.0 3.4	5.0* 3.3*	2.0* 1.3*	2.8 0.67*	20* 13*

* Results are less than the figure listed.
*** Results are greater than the figure listed.

TABLE B-22
SPECTROGRAPHIC ANALYSES OF SURFACE WATER
LOS ANGELES REGION (No. 4)

Station	Site No	Date	Constituents in parts per billion																
			Aluminum (Al)	Beryllium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chromium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germanium (Ge)	Manganese (Mn)	Molybdenum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
Santa Clara River at Los Angeles - Ventura County Line	46	5/3 9/10	8.0 7.1	1.0* 0.57*	1.0* 1.6	5.0* 1.4*	5.0* 36	5.0* 1.4*	18 1.4*	5.0 30	20* 5.7*	1.0* 0.29*	5.0* 1.4*	1.0* 5.4	2.3 10	5.0* 1.4*	2.0* 0.57*	1.7 0.29*	20* 5.7
	46a	5/3 9/11	7.6 1.4*	1.0* 0.57*	1.0* 2.5	5.0* 1.4*	5.0* 25	5.0* 1.4*	5.0* 1.4*	11 19	20* 5.7*	1.0* 0.29*	5.0* 1.4*	1.0* 29***	2.0 6.9	5.0* 1.4*	2.0* 0.57*	4.2 0.29*	20* 5.7*
Los Angeles River at Long Beach	48	5/8 9/7	10 11	1.0* 0.57*	1.0* 0.29*	5.0* 1.4*	10 11	5.0* 1.4*	22 1.4*	100*** 22	20* 5.7*	1.0* 0.29*	215 47	1.0* 5.1	14 24	5.0* 1.4*	2.0* 0.57*	2.7 0.29*	20* 5.7*
Rio Hondo at Whittier Narrows	49	5/8 9/13	9.0 4.6	1.0* 0.57*	1.0* 0.29*	5.0* 1.4*	5.0* 2.6	5.0* 1.4*	11 1.4*	3.8 12	20* 5.7*	1.0* 0.29*	5.0* 1.4*	1.1 8.3	1.7 7.1	5.0* 1.4*	2.0* 0.57*	7.4 2.5	20* 5.7*
Mission Creek at Whittier Narrows	49a	5/8 9/13	9.4 11	1.0* 0.57*	1.0* 26***	5.0* 1.4*	5.0* 189	5.0* 1.4*	7.9 1.4*	5.0 13	20* 5.7*	1.0* 0.29*	5.0* 1.4*	1.0* 7.1	2.0 7.1	5.0* 1.4*	2.0* 0.57*	4.8 2.5	20* 5.7*
San Gabriel River at Whittier Narrows	50	5/8 9/13	12 4.9	1.0* 0.57*	1.0* 6.3	5.0* 1.4*	5.0* 189	5.0* 1.4*	5.0* 12	5.6 6.6	20* 5.7*	1.0* 0.29*	5.0* 1.4*	1.0* 4.0	1.1 7.4	5.0* 1.4*	2.0* 0.57*	5.8 1.3	20* 5.7*
Ventura River near Ventura	61	5/3 9/11	12 1.4*	1.0* 0.57*	1.0* 0.29*	5.0* 1.4*	5.0* 1.4*	5.0* 1.4*	15 1.4*	4.5 5.1	20* 5.7*	1.0* 0.29*	5.0* 1.4*	1.0* 2.4	2.0 2.8	5.0* 1.4*	2.0* 2.1	1.2 0.29*	20* 5.7*

* Results are less than the figure listed.
*** Results are greater than the figure listed.

TABLE B-22
SPECTROGRAPHIC ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (No. 5)

Station	Sta No	Date 1962	Constituents in parts per billion																
			Alumi- num (Al)	Beryl- lium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chro- mium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germa- nium (Ge)	Manga- nese (Mn)	Molyb- denum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
Sacramento River at Keswick	12	5/1 9/8	40 38	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	9.6 3.3*	60 45	20* 13*	1.0* 0.67*	8.0 3.3*	1.0* 0.67*	1.6 1.7	10 3.3*	2.0* 1.3*	2.0 1.8	20* 13*
	12c	5/3 9/11	29 13	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 8.7	5.0* 3.3*	8.4 3.3*	35 13	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	1.6 3.0	5.0* 3.3*	2.0* 1.3*	2.0 1.9	20* 13*
Sacramento River near Hamilton City	13	5/14 9/20	29 21	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	27 8.7	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	1.2 1.5	5.0* 3.3*	2.0* 1.3*	2.6 2.1	20* 13*
Stony Creek near Hamilton City	13a	5/14	7.8	1.0*	1.0*	5.0*	5.0*	5.0*	5.0*	3.6	20*	1.0*	5.0*	1.0*	1.0*	5.0*	2.0*	1.9	20*
Sacramento River at Colusa	13b	5/7 9/19	18 6.0	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 23	5.0* 3.3*	5.0* 3.3*	23 12	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	9.0 2.3	5.0* 3.3*	2.7 1.3*	3.0 1.9	20* 13*
Sacramento River above Colusa Trough	14b	5/7 9/19	28 9.3	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	44 7.3	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	1.2 2.5	5.0* 3.3*	2.3 1.3*	4.1 3.7	20* 13*
Sacramento River at Freeport	15b	5/8 9/5	16 9.3	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	32 7.3	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.87	1.2 2.5	5.0* 3.3*	2.0* 1.3*	2.6 3.5	20* 13*
Sacramento River at Rio Vista	16	5/3 9/5	22 15	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	40 8.7	20* 13*	1.0* 0.67*	5.2 3.3*	1.0* 0.67**	1.8 2.7	9.0 3.3*	2.0* 1.3*	2.2 3.1	20* 13*
Pit River near Canby	17a	5/2 9/17	255 113	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	100*** 167	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 2.4	1.4 3.5	10 3.3*	9.8 4.1	15 7.3	20* 13*
Feather River near Oroville	19	5/9 9/11	20 13	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	46 36	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	1.0* 1.5	5.0* 3.3*	2.0* 1.3*	1.0 1.5	20* 13*
Feather River at Nicolaus	20	5/15 9/10	11 16	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 8.4	5.0* 3.3*	5.0* 3.3*	27 39	20* 13*	1.0* 0.67*	5.0* 16	1.0* 0.67*	1.4 2.2	17 3.3*	2.0* 1.3*	1.6 1.7	20* 13*
Yuba River at Marysville	21	5/15 9/10	24 11	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	32 39	20* 13*	1.0* 0.67*	5.0* 8.0	1.0* 0.67*	1.7 1.9	14 3.3*	2.0* 1.3*	1.0 1.1	20* 13*
American River at Sacramento	22	5/10 9/11	10 25	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	15 29	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	7.6 23	9.0 3.3*	2.0* 1.3*	1.0* 0.67*	20* 13*
American River at Nimbus Dam	22a	5/10 9/11	12 17	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 21	5.0* 3.3*	5.0* 3.3*	12 21	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	1.0* 2.2	5.0* 3.3*	2.0* 1.3*	1.0* 0.67*	20* 13*
Mokelumne River at Woodbridge	23	5/10 9/6	24 11	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	46 23	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67**	1.0 2.5	5.0* 3.3*	2.0 1.3*	1.0* 2.7	20* 13*
San Joaquin River at Fremont Ford Bridge	25c	5/1 9/7	4.1 3.3*	1.0* 1.3*	1.0* 1.9	5.0* 3.3*	5.0* 27	5.0* 3.3*	5.0* 3.3*	5.6 6.7	20* 13*	1.0* 0.67	5.0* 3.3*	1.0* 6.0	2.2 2.7	5.0* 3.3*	2.0* 1.3*	2.8 6.2	20* 13*
San Joaquin River near Vernalis	27	5/1 9/6	7.6 3.3*	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	12 13	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 2.9	1.0* 0.67*	5.0* 3.3*	2.0* 1.3*	3.2 0.67*	20* 13*
Stanislaus River near Mouth	29	5/1 9/6	5.3 3.3*	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	12 9.3	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 1.9	1.0* 0.67*	5.0* 3.3*	2.0* 1.3*	2.0 0.67*	20* 13*

* Results are less than the figure listed.
** Results are equal to but slightly less than the figure listed.
*** Results are greater than the figure listed.

TABLE B-23
SPECTROGRAPHIC ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (No. 5) (Continued)

Station	Sta No	Date	Constituents in parts per billion															
			Alumi- num (Al)	Beryl- lium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chro- mium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germa- nium (Ge)	Manga- nese (Mn)	Molyb- denum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)
Tuolumne River at Tuolumne City	31	5/9 9/7	3.8 3.3*	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	7.0 23	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	2.4 0.67*	5.0* 3.3*	2.0* 1.3*	1.0* 0.67*	20* 13*
	32	5/1 9/	4.6 6.0	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	7.8 8.0	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 1.9	1.0* 0.80	5.0* 3.3*	2.0* 1.3*	3.4 2.1	20* 13*
Kings River below People's Weir	34	5/8 9/5	18 16	1.0* 1.3*	1.0* 1.6	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	32 40	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 2.0*	1.0* 15	5.0* 3.3*	2.0* 1.3*	1.2 0.67*	20* 13*
Kern River near Bakersfield	36	5/8 9/5	38 8.7	1.0* 1.3*	1.0* 3.1	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	76 8.0	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 4.8	1.0* 0.67**	5.0* 3.3*	2.0* 1.3*	1.9 0.67*	20* 13*
Clear Lake at Lakeport	41	5/2 9/4	6.5 11	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	8.6 6.0	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67**	1.2 3.5	8.3 3.3*	2.0* 1.3*	8.6 1.9	20* 13*
Cache Creek near Lower Lake	42	5/2 9/4	3.4 12	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	8.6 11	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.93	1.3 2.1	10 3.3*	2.0* 1.3*	1.5 3.9	20* 13*
Bear River near Wheatland	78	5/15 9/10	7.6 3.3*	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	13 13	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	1.4 0.67*	14 3.3*	2.0* 1.3*	1.0* 0.67*	20* 13*
Cache Creek near Capay	80	5/2 9/4	14 12	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	13 133	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67*	2.1 1.6	5.0* 3.3*	2.0* 1.3*	2.2 0.67	20* 13*
Putah Creek near Winters	81	5/3 9/4	9.4 15	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	7.0 8.0	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.67**	1.8 4.6	5.0* 3.3*	2.0* 1.3*	2.6 1.6	20* 13*
Tule River below Success Dam	91	5/10 9/13	9.4 11	1.0* 1.3*	1.0* 7.3	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	20 4.4	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 1.4	1.0* 1.6	5.0* 3.3*	2.0* 1.3*	1.6 1.3	20* 13*
Delta-Mendota Canal near Mendota	92	5/1 9/7	105 26	1.0* 1.3*	1.0* 1.0	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	75 15	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 2.3	2.9 4.2	5.0* 3.3*	3.4 1.3*	4.2 4.6	20* 13*
Delta-Mendota Canal near Tracy	93	5/8 9/6	14 47	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	24 29	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 1.5	1.2 3.7	6.8 3.3*	2.0* 1.3*	4.8 5.3	20* 13*
Cosumnes River at McConnell	94a	5/10	12	1.0*	1.0*	5.0*	5.0*	5.0*	90	20*	1.0*	5.0*	1.0*	1.4	5.0*	2.0*	1.4	20*
Delta Cross Channel near Walnut Grove	98	5/9 9/4	16 13	1.0* 1.3*	1.0* 29	5.0* 3.3*	5.0* 133***	5.0* 3.3*	100*** 6.7	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 0.80	8.0 1.4	5.0* 3.3*	2.0* 1.3*	2.8 3.9	20* 13*
Old River at Mandeville Island	112	5/7 9/6	36 40	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 3.3*	5.0* 3.3*	60 29	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 1.1	2.6 3.7	5.0* 3.3*	2.0* 1.3*	3.4 5.2	20* 13*

* Results are less than the figure listed.
** Results are equal to but slightly less than the figure listed.
*** Results are greater than the figure listed.

TABLE B-24
SPECTROGRAPHIC ANALYSES OF SURFACE WATER
LAHONTIAN REGION (No. 6)

Station	Sta No	Date	Constituents in parts per billion																
			Alumi- num (Al)	Beryl- lium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chro- mium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germa- nium (Ge)	Mango- nese (Mn)	Molyb- denum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
Lake Tahoe at Tahoe City	38	5/9 9/12	12 17	1.0* 1.3*	1.0* 0.67*	5.0* 3.3*	5.0* 12	5.0* 3.3*	5.0* 3.3*	6.2 8.0	20* 13*	1.0* 0.67*	5.0* 3.3*	1.0* 3.1	1.7 0.67*	5.0* 3.3*	2.0* 1.3*	1.2 0.67*	20* 13*
Truckee River near Farad	53	5/11 9/14	44 8.0	1.0* 0.57*	1.0* 0.29*	5.0* 1.4*	5.0* 1.4*	5.0* 1.4*	5.0* 1.4*	41 13	20* 5.7*	1.0* 0.29*	5.0* 1.4*	1.0* 1.3*	1.0* 0.60	12 1.4*	2.0* 0.57*	1.3 0.77	20* 5.7*
Mojave River near Victorville	67	5/14 9/12	5.7 9.1	1.0* 0.57*	1.0* 0.29*	5.0* 1.4*	5.0* 11	5.0* 1.4*	8.4 1.4*	4.8 12	20* 5.7*	1.0* 0.29*	5.0* 1.4*	1.0* 2.5	1.0* 1.7	5.0* 1.4*	2.0* 0.57*	3.1 3.4	20* 5.7*

* Results are less than the amount indicated.

TABLE B-25
SPECTROGRAPHIC ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN REGION (No. 7)

Station	Sta No	Date	Constituents in parts per billion																	
			Alumi- num (Al)	Beryl- lium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chro- mium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germa- nium (Ge)	Manga- nese (Mn)	Molyb- denum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)	
Colorado River at Yuma	56	5/16 9/5	11 5.7	1.0* 0.57*	1.0* 26	5.0* 1.4*	5.0* 66	5.0* 1.4*	5.0* 1.4*	7.8 5.4	20* 5.7*	1.0* 0.29*	5.0* 1.4*	1.0* 12	1.6 5.1	5.0* 1.4*	2.0* 0.57*	2.8 1.7	20* 5.7*	

* Results are less than the figure listed.

TABLE B-26
SPECTROGRAPHIC ANALYSES OF SURFACE WATER
SANTA ANA REGION (No. 8)

Station	Sta No	Date	Constituents in parts per billion																
			Alumi- num (Al)	Beryl- lium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chro- mium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germa- nium (Ge)	Manga- nese (Mn)	Molyb- denum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
Warm Creek near Colton	50b	5/2 9/4	14 39	1.0* 0.57*	1.0* 0.29*	5.0* 1.4*	5.0* 1.4*	5.0* 1.4*	62 26	33 67	20* 5.7*	1.0* 0.29*	27 14	1.0* 6.0	61 29***	5.0* 1.4*	3.4 0.57*	4.2 1.4	20* 5.7*
Santa Ana River near Arlington	51	5/2 9/12	9.0 1.4*	1.0* 0.57*	1.0* 0.29*	5.0* 1.4*	5.0* 1.4*	5.0* 1.4*	5.0* 1.4*	4.0 P	20* 5.7*	1.0* 0.29*	5.0* 1.4*	1.0* P	1.0 0.29*	5.0* 1.4*	2.0* 0.57*	4.8 0.29*	20* 5.7*
Santa Ana River below Prado Dam	51a	5/7 9/4	41 8.0	1.0* 0.57*	1.0* 0.29*	5.0* 1.4*	5.0* 1.4*	5.0* 1.4*	5.0* 1.4*	5.0 10	20* 5.7*	1.0* 0.29*	5.0* 1.4*	1.0* 4.3	1.4 10	5.0* 1.4*	2.0* 0.57*	8.7 4.3	20* 5.7*
Santa Ana River near Norco	51e	5/7 9/12	7.7 11	1.0* 0.57*	1.0* 0.29*	5.0* 1.4*	5.0* 1.4*	5.0* 1.4*	28 1.4*	4.5 27	20* 5.7*	1.0* 0.29*	120 1.4*	1.4 3.1	2.4 5.4	5.0* 1.4*	2.0* 0.57*	2.4 1.3	20* 5.7*

P. Present in sample not determined quantitatively.
* Results are less than the figure listed.
*** Results are greater than the figure listed.

TABLE B-27
SPECTROGRAPHIC ANALYSES OF SURFACE WATER

SAN DIEGO REGION (No. 9)

Station	Sta No	Date	Constituents in parts per billion																
			Aluminum (Al)	Beryllium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chromium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germanium (Ge)	Manganese (Mn)	Molybdenum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
Escondido Creek at Harmony Grove	63	5/9 9/6	6.0 18	1.0* 0.57*	1.0* 0.29*	5.0* 1.4*	5.0* 1.4*	5.0* 1.4*	25 1.4*	13 30	20* 5.7*	1.0* 0.29*	135 69	1.0* 5.7	16 29***	5.0* 1.4*	2.0* 0.57*	3.2 0.29*	20* 5.7*
San Diego River at Old Mission Dam	65	5/9	10	1.0*	1.0*	5.0*	5.0*	5.0*	5.0*	5.6	20*	1.0*	5.0*	1.0*	2.4	14	2.0*	15	20*

* Results are less than the figure listed.

*** Results are greater than the figure listed.

RADIOASSAY OF SURFACE WATERS

NORTH COASTAL REGION (NO. 1)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
1A	Shasta River	Yreka	5/16 9/13	0.0 ± 0.1 0.2 ± 0.2	0.0 ± 0.2 0.1 ± 0.1	4.6 ± 4.7 8.1 ± 4.7	0.5 ± 4.6 2.6 ± 4.6
1B	Scott River	Fort Jones	5/15 9/13	0.1 ± 0.2 0.0 ± 0.1	0.0 ± 0.2 0.0 ± 0.1	0.4 ± 4.7 4.0 ± 4.9	1.9 ± 4.7 0.0 ± 4.8
1C	Klamath River	abv Hamburg Res	5/16 9/13	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	3.9 ± 4.8 11.0 ± 4.9	0.0 ± 4.7 4.8 ± 4.8
1D	Butte Creek	Macdoel	5/15 9/12	0.1 ± 0.2 0.0 ± 0.1	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 4.7 3.9 ± 4.7	0.0 ± 4.6 2.5 ± 4.7
1E	Antelope Creek	Tennant	5/15 9/12	0.1 ± 0.2 0.1 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	3.7 ± 4.7 3.0 ± 4.7	1.3 ± 4.6 0.0 ± 4.6
1F	Klamath River	Iron Gate Dam	5/16 9/13	0.0 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	5.9 ± 4.7 5.3 ± 4.8	5.6 ± 4.7 0.0 ± 4.7
2	Klamath River	Somesbar	5/8 9/4	0.1 ± 0.2 0.1 ± 0.2	0.0 ± 0.2 0.1 ± 0.2	1.1 ± 4.5 9.6 ± 4.7	1.3 ± 4.5 0.0 ± 4.5
2A	Salmon River	Somesbar	5/8 9/4	0.1 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	0.4 ± 4.4 2.5 ± 4.8	2.8 ± 4.5 2.3 ± 4.8
2B	Klamath River	Seiad Valley	5/16 9/13	0.1 ± 0.2 0.0 ± 0.1	0.0 ± 0.2 0.0 ± 0.1	3.4 ± 4.7 4.3 ± 4.8	2.0 ± 4.6 0.6 ± 4.8
3	Klamath River	Klamath	5/10 9/7	0.1 ± 0.2 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	5.9 ± 4.7 0.0 ± 4.8	7.1 ± 4.7 0.0 ± 4.8
3A	Smith River	Crescent City	5/9 9/7	0.1 ± 0.2 0.0 ± 0.1	0.0 ± 0.2 0.0 ± 0.1	0.8 ± 4.9 0.0 ± 4.8	0.0 ± 4.8 0.0 ± 4.8
3B	Redwood Creek	Orick	5/10 9/7	0.1 ± 0.2 0.1 ± 0.1	0.0 ± 0.2 0.0 ± 0.1	2.4 ± 4.7 0.9 ± 4.7	6.4 ± 4.8 1.9 ± 4.7

TABLE B-28

RADIOASSAY OF SURFACE WATERS

NORTH COASTAL REGION (NO. 1) (continued)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
4	Trinity River	Hoopa	5/8 9/4	0.0 ± 0.2 0.1 ± 0.2	0.0 ± 0.1 0.0 ± 0.1	0.0 ± 4.4 6.9 ± 4.7	2.2 ± 4.5 0.9 ± 4.6
4A	Trinity River	Lewiston	5/10 9/8	0.0 ± 0.2 0.1 ± 0.1	0.0 ± 0.2 0.0 ± 0.1	1.4 ± 4.4 1.7 ± 4.3	1.6 ± 4.5 0.0 ± 4.3
4B	Trinity River	Burnt Ranch	5/10 9/8	0.1 ± 0.2 0.0 ± 0.2	0.0 ± 0.1 0.0 ± 0.2	0.0 ± 4.8 6.5 ± 4.7	0.0 ± 4.8 1.2 ± 4.6
5	Eel River	McCann	5/9 9/6	0.0 ± 0.2 0.1 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 4.5 5.7 ± 4.7	4.7 ± 4.6 0.0 ± 4.6
5A	Van Duzen River	Bridgeville	5/8 9/6	0.0 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 4.3 1.6 ± 4.7	0.0 ± 4.4 0.0 ± 4.7
5B	Outlet Creek	Longvale	5/10 9/12	0.0 ± 0.2 0.3 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	4.2 ± 4.8 7.5 ± 4.6	0.0 ± 4.7 0.0 ± 4.4
5C	Eel River, MF	below Dos Rios	5/10 9/12	0.0 ± 0.1 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 4.0 2.9 ± 4.5	0.9 ± 4.1 0.0 ± 4.5
5D	Eel River	near Dos Rios	5/10 9/12	0.0 ± 0.1 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 4.8 10.0 ± 4.8	0.0 ± 4.7 9.9 ± 4.8
6	Eel River	Scotia	5/8 9/6	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 0.4 5.8 ± 4.5	0.0 ± 4.5 6.9 ± 4.5
6A	Mad River	Arcata	5/10 9/5	0.0 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	4.4 ± 4.8 6.1 ± 4.8	19.3 ± 5.0 10.0 ± 4.6
7	Eel River, SF	Miranda	5/9 9/6	0.0 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.1 ± 0.1	8.2 ± 4.7 0.4 ± 4.8	16.4 ± 4.8 0.0 ± 4.7
7A	Mattole River	Petrolia	5/9 9/5	0.1 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 4.7 3.6 ± 4.6	10.8 ± 4.9 0.0 ± 4.5

RADIOASSAY OF SURFACE WATERS

NORTH COASTAL REGION (NO. 1) (continued)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
8A	Russian River	Hopland	5/10 9/13	0.0 ± 0.1 0.0 ± 0.1	0.1 ± 0.2 0.0 ± 0.2	0.0 ± 4.7 0.0 ± 4.5	0.0 ± 4.7 15.3 ± 4.7
8B	Navarro River	Navarro	5/9 9/12	0.1 ± 0.1 0.0 ± 0.2	0.1 ± 0.1 0.0 ± 0.2	1.5 ± 4.7 0.0 ± 4.4	0.4 ± 4.7 1.6 ± 4.5
8C	Big River	Mouth	5/9 9/12	0.0 ± 0.1 0.0 ± 0.2	0.1 ± 0.2 0.0 ± 0.2	0.0 ± 4.2 4.9 ± 4.8	0.0 ± 4.2 1.3 ± 4.8
9	Russian River	Healdsburg	5/8 9/11	0.1 ± 0.2 0.1 ± 0.2	0.0 ± 0.2 0.1 ± 0.1	0.5 ± 4.7 0.0 ± 4.3	3.6 ± 4.7 4.8 ± 4.4
9A	Gualala River, SF	Annapolis	5/8 9/11	0.0 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 4.0 0.0 ± 4.3	3.1 ± 4.1 0.0 ± 4.3
10	Russian River	Guerneville	5/8 9/11	0.1 ± 0.2 0.0 ± 0.1	0.0 ± 0.1 0.0 ± 0.1	0.0 ± 4.0 0.0 ± 4.4	1.3 ± 4.1 0.0 ± 4.5
10A	Russian River, EF	Potter Vly PH	5/10 9/13	0.2 ± 0.2 0.1 ± 0.2	0.0 ± 0.1 0.0 ± 0.1	4.0 ± 4.8 6.8 ± 4.6	3.6 ± 4.8 28.5 ± 4.9
10C	Noyo River	Fort Bragg	5/9 9/12	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 0.1 0.0 ± 0.1	7.6 ± 4.8 1.9 ± 4.5	0.0 ± 4.6 0.0 ± 4.4

TABLE B-29

RADIOASSAY OF SURFACE WATERS

SAN FRANCISCO BAY REGION (NO. 2)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
71	Arroyo Del Valle	Livermore	5/4	0.0 \pm 0.2	0.0 \pm 0.2	4.1 \pm 4.1	0.0 \pm 4.1
72	Napa River	St. Helena	5/8 9/13	0.0 \pm 0.2	0.0 \pm 0.2	3.3 \pm 4.7	0.0 \pm 4.6
				0.0 \pm 0.2	0.0 \pm 0.2	5.5 \pm 4.6	0.0 \pm 4.4
73	Alameda Creek	Niles	5/4 9/6	0.0 \pm 0.1	0.0 \pm 0.2	23.3 \pm 5.1	0.0 \pm 4.7
				0.0 \pm 0.1	0.0 \pm 0.2	3.4 \pm 4.8	0.0 \pm 4.7
74	Los Gatos Creek	Los Gatos	5/4 9/6	0.1 \pm 0.2	0.3 \pm 0.3	0.0 \pm 4.4	6.7 \pm 4.5
				0.1 \pm 0.1	0.4 \pm 0.2	5.8 \pm 4.7	5.2 \pm 4.7
82	Coyote Creek	Madrone	5/2	0.0 \pm 0.2	0.1 \pm 0.3	0.0 \pm 4.6	0.0 \pm 4.6

RADIOASSAY OF SURFACE WATERS

CENTRAL COASTAL REGION (NO. 3)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
43	Salinas River	Spreckels	5/3 9/6	0.3 \pm 0.2 0.1 \pm 0.2	0.2 \pm 0.2 0.3 \pm 0.2	10.8 \pm 4.3 12.2 \pm 4.8	5.3 \pm 4.3 0.4 \pm 4.6
43A	Salinas River	Paso Robles	5/2	0.1 \pm 0.2	0.1 \pm 0.2	6.9 \pm 4.8	5.8 \pm 4.8
43B	Nacimiento River	San Miguel	5/2 9/5	0.1 \pm 0.2 0.0 \pm 0.1	0.1 \pm 0.2 0.1 \pm 0.2	0.0 \pm 4.8 6.2 \pm 4.7	0.0 \pm 4.8 5.0 \pm 4.7
43C	Salinas River	Bradley	5/2 9/5	0.0 \pm 0.2 0.1 \pm 0.2	0.1 \pm 0.2 0.1 \pm 0.2	3.6 \pm 4.8 5.6 \pm 4.7	9.7 \pm 4.8 1.3 \pm 4.7
43D	San Antonio Cr	Pleyto	5/2	0.2 \pm 0.2	0.1 \pm 0.2	7.1 \pm 5.1	0.0 \pm 5.0
44A	Cuyama River	Garey	5/1 9/11	0.1 \pm 0.2 0.0 \pm 0.2	0.0 \pm 0.1 0.0 \pm 0.2	2.7 \pm 5.0 12.8 \pm 5.0	0.0 \pm 4.9 0.0 \pm 4.8
44B	Santa Ynez River	Cachuma Res	5/1 9/10	0.0 \pm 0.2 0.4 \pm 0.2	0.0 \pm 0.2 0.1 \pm 0.1	7.2 \pm 4.8 14.1 \pm 5.1	0.0 \pm 4.7 11.6 \pm 5.0
75	San Lorenzo R	Big Trees Park	5/3 9/6	0.1 \pm 0.2 0.0 \pm 0.1	0.0 \pm 0.2 0.0 \pm 0.1	0.0 \pm 4.1 8.7 \pm 4.7	4.1 \pm 4.2 0.8 \pm 4.7
76	Soquel Creek	Soquel	5/3 9/6	0.0 \pm 0.2 0.0 \pm 0.1	0.0 \pm 0.2 0.0 \pm 0.1	4.8 \pm 4.4 3.3 \pm 4.6	0.2 \pm 4.4 0.0 \pm 4.4
77	Pajaro River	Chittenden	5/3 9/5	0.0 \pm 0.2 0.1 \pm 0.2	0.0 \pm 0.2 0.0 \pm 0.1	3.3 \pm 4.3 4.8 \pm 4.7	0.0 \pm 4.2 0.7 \pm 4.6
77A	San Benito River	Bear Vly Fire St	5/2 9/4	0.0 \pm 0.2 0.1 \pm 0.1	0.0 \pm 0.2 0.0 \pm 0.1	0.0 \pm 4.5 0.0 \pm 4.7	0.0 \pm 4.5 0.0 \pm 4.6
83	Carmel River	Robles Del Rio	5/3	0.0 \pm 0.2	0.0 \pm 0.2	0.0 \pm 4.3	0.0 \pm 4.3
96	Uvas Creek	Morgan Hill	5/2 9/4	0.0 \pm 0.2 0.0 \pm 0.1	0.0 \pm 0.2 0.0 \pm 0.1	0.1 \pm 4.5 2.7 \pm 4.4	6.8 \pm 4.6 5.6 \pm 4.5

RADIOASSAY OF SURFACE WATERS

LOS ANGELES REGION (NO. 4)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
45B	Matilija Creek	above Dam	9/11	0.0 ± 0.1	0.0 ± 0.1	3.8 ± 4.4	2.4 ± 4.4
46	Santa Clara R	LA-Ventura Co Ln	9/10	0.0 ± 0.2	0.0 ± 0.2	1.8 ± 5.0	3.8 ± 5.0
46A	Santa Clara R	Santa Paula	5/3 9/11	0.2 ± 0.2 0.2 ± 0.2	0.3 ± 0.2 0.2 ± 0.2	11.7 ± 4.9 2.2 ± 4.6	0.0 ± 4.7 0.0 ± 4.5
46C	Piru Creek	Piru	5/9 9/10	0.2 ± 0.2 0.3 ± 0.2	0.2 ± 0.2 0.0 ± 0.2	8.8 ± 4.8 13.9 ± 5.1	5.9 ± 4.8 2.6 ± 4.9
46D	Sespe Creek	Fillmore	5/3 9/10	0.6 ± 0.2 0.2 ± 0.1	0.0 ± 0.1 0.2 ± 0.1	1.8 ± 4.9 1.2 ± 4.4	0.0 ± 4.8 1.8 ± 4.4
46E	Santa Paula Cr	Santa Paula	5/3 9/11	0.2 ± 0.2 0.0 ± 0.2	0.0 ± 0.1 0.0 ± 0.1	2.7 ± 4.8 4.4 ± 4.4	4.5 ± 4.8 5.4 ± 4.4
46F	Santa Clara R	Hwy 99 Bridge	5/3 9/10	0.2 ± 0.3 0.7 ± 0.3	0.4 ± 0.3 0.1 ± 0.1	14.7 ± 4.8 12.3 ± 5.1	25.2 ± 5.0 3.2 ± 4.9
47	Los Angeles R	LA-Figueroa St	5/8 9/7	0.1 ± 0.2 0.1 ± 0.1	0.2 ± 0.2 0.1 ± 0.1	8.6 ± 4.8 5.1 ± 5.0	2.2 ± 4.8 0.0 ± 4.9
48	Los Angeles R	Long Beach	5/8 9/7	0.0 ± 0.2 0.3 ± 0.2	7.4 ± 0.8 3.1 ± 0.5	4.6 ± 4.8 85.6 ± 5.7	34.7 ± 5.1 29.4 ± 5.0
49	Rio Hondo River	Whittier Narrows	5/8 9/13	0.6 ± 0.3 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	8.3 ± 4.9 11.6 ± 4.7	0.0 ± 4.8 5.8 ± 4.6
49A	Mission Creek	Whittier Narrows	5/8 9/13	0.8 ± 0.3 0.0 ± 0.2	0.0 ± 0.1 0.0 ± 0.2	7.9 ± 4.9 11.6 ± 4.7	0.0 ± 4.8 5.3 ± 4.6
50	San Gabriel R	Whittier Narrows	5/8 9/13	0.7 ± 0.3 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	6.2 ± 4.9 7.3 ± 5.2	0.0 ± 4.7 0.0 ± 5.1

TABLE B-31

RADIOASSAY OF SURFACE WATERS

LOS ANGELES REGION (NO. 4) (continued)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
50D	San Gabriel R	Azusa Pwr Hse	5/7	0.0 \pm 0.2	0.0 \pm 0.2	8.0 \pm 4.9	0.0 \pm 4.8
			9/13	0.1 \pm 0.2	0.1 \pm 0.2	4.7 \pm 5.3	0.0 \pm 5.2
61	Ventura River	Ventura	5/3	0.2 \pm 0.2	0.1 \pm 0.1	6.6 \pm 4.8	0.0 \pm 4.7
			9/11	0.4 \pm 0.2	0.1 \pm 0.1	0.0 \pm 4.4	0.0 \pm 4.4

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter		
				Dissolved Alpha	Solid Alpha	Solid Beta
11	Sacramento River	Delta	5/1 9/12	0.4 ± 0.2 0.2 ± 0.2	0.1 ± 0.1 0.0 ± 0.1	4.6 ± 4.8 6.2 ± 4.8 0.1 ± 4.8 0.0 ± 4.7
11A	Cottonwood Cr	below North Fork	5/3 9/14	0.0 ± 0.2 0.3 ± 0.2	0.0 ± 0.2 0.1 ± 0.1	3.1 ± 4.8 8.9 ± 4.8 0.0 ± 4.8 0.0 ± 4.6
11B	Cottonwood Cr, SF	abv Cottonwood Cr	5/3	0.1 ± 0.2	0.0 ± 0.1	1.2 ± 4.8 0.0 ± 4.8
12	Sacramento River	Keswick	5/1 9/8	0.0 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	3.4 ± 4.8 6.3 ± 4.5 2.4 ± 4.8 3.3 ± 4.4
12B	Cottonwood Creek	Cottonwood	5/3 9/14	0.0 ± 0.2 0.1 ± 0.1	0.0 ± 0.2 0.0 ± 0.2	4.4 ± 4.8 2.8 ± 5.1 0.0 ± 4.8 0.0 ± 5.1
12C	Sacramento River	Bend	5/3 9/11	0.1 ± 0.2 0.0 ± 0.1	0.0 ± 0.1 0.0 ± 0.1	0.1 ± 4.4 3.4 ± 4.3 0.0 ± 4.4 2.5 ± 4.3
12D	Clear Creek	Igo	5/3 9/14	0.2 ± 0.2 0.1 ± 0.2	0.2 ± 0.2 0.0 ± 0.2	3.6 ± 4.8 1.4 ± 5.2 0.5 ± 4.8 0.0 ± 5.2
13	Sacramento River	Hamilton City	5/14 9/20	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 4.6 3.7 ± 4.6 3.0 ± 4.7 0.2 ± 4.6
13A	Stony Creek	Hamilton City	5/14	0.1 ± 0.2	0.0 ± 0.2	0.0 ± 4.7 0.0 ± 4.6
13B	Sacramento River	Colusa	5/7 9/19	0.0 ± 0.1 0.0 ± 0.2	0.1 ± 0.2 0.0 ± 0.2	0.9 ± 4.4 0.0 ± 4.7 1.4 ± 4.4 0.0 ± 4.8
13C	Stony Creek	Blk Butte DamSite	5/17 9/20	0.0 ± 0.2 0.1 ± 0.2	0.0 ± 0.2 0.5 ± 0.2	10.2 ± 4.6 7.6 ± 4.6 7.6 ± 4.6 5.4 ± 4.5
13D	Thomes Creek	Paskenta	5/17 9/20	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	8.4 ± 4.7 0.0 ± 4.8 0.0 ± 4.6 0.2 ± 4.8

TABLE B-32

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5) (continued)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
13E	Elder Creek	Paskenta	5/17 9/20	0.0 \pm 0.2 0.0 \pm 0.1	0.0 \pm 0.2 0.0 \pm 0.1	2.7 \pm 4.8 2.6 \pm 4.5	0.0 \pm 4.7 5.1 \pm 4.6
14A	Sacramento Slgh	Knights Landing	5/7 9/19	0.0 \pm 0.2 0.0 \pm 0.2	0.0 \pm 0.2 0.1 \pm 0.2	0.0 \pm 4.4 4.0 \pm 4.7	0.0 \pm 4.3 16.2 \pm 4.9
14B	Sacramento River	abv Colusa Trgh	5/7 9/19	0.0 \pm 0.2 0.1 \pm 0.2	0.0 \pm 0.2 0.2 \pm 0.2	0.0 \pm 4.7 3.6 \pm 4.9	0.0 \pm 4.7 0.0 \pm 4.8
15B	Sacramento River	Freeport	5/3 9/5	0.0 \pm 0.2 0.0 \pm 0.2	0.1 \pm 0.2 0.0 \pm 0.2	2.2 \pm 4.5 5.2 \pm 4.7	1.4 \pm 4.5 5.9 \pm 4.7
16	Sacramento River	Rio Vista	5/3 9/5	0.0 \pm 0.2 0.1 \pm 0.1	0.0 \pm 0.1 0.2 \pm 0.2	0.0 \pm 4.8 7.6 \pm 4.7	0.0 \pm 4.8 4.4 \pm 4.6
16A	Calaveras River	Jenny Lind	5/7	0.1 \pm 0.2	0.0 \pm 0.1	0.0 \pm 4.5	0.2 \pm 4.5
17	Pit River	Montgomery Creek	5/2 9/17	0.0 \pm 0.1 0.0 \pm 0.2	0.2 \pm 0.2 0.0 \pm 0.2	3.8 \pm 4.5 16.4 \pm 5.1	0.0 \pm 4.4 0.0 \pm 4.8
17A	Pit River	Canby	5/2 9/17	0.0 \pm 0.1 0.0 \pm 0.1	0.0 \pm 0.2 0.1 \pm 0.1	0.0 \pm 4.4 13.3 \pm 4.6	0.0 \pm 4.4 0.2 \pm 4.4
17C	Pit River	Bieber	5/2	0.1 \pm 0.2	0.2 \pm 0.2	4.3 \pm 4.4	0.2 \pm 4.4
17D	Indian Creek	Crescent Mills	5/9 9/11	0.2 \pm 0.2 0.1 \pm 0.2	0.0 \pm 0.3 0.1 \pm 0.2	4.6 \pm 4.5 5.3 \pm 4.7	1.7 \pm 4.4 6.6 \pm 4.7
18	McCloud River	abv Shasta Lake	5/1 9/12	0.1 \pm 0.2 0.0 \pm 0.2	0.0 \pm 0.2 0.0 \pm 0.2	0.2 \pm 4.5 3.5 \pm 4.8	0.0 \pm 4.5 1.5 \pm 4.8

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5) (continued)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
18A	Pit River, SF	Likely	5/2 9/18	0.0 ± 0.2 0.1 ± 0.2	0.1 ± 0.2 0.0 ± 0.1	0.0 ± 4.4 24.0 ± 5.2	0.0 ± 4.4 10.5 ± 5.1
19	Feather River	Oroville	5/9 9/11	0.1 ± 0.2 0.1 ± 0.1	0.0 ± 0.1 0.2 ± 0.2	3.4 ± 4.8 9.5 ± 4.8	1.8 ± 4.8 0.0 ± 4.7
20	Feather River	Nicolaus	5/15 9/10	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 0.2 0.1 ± 0.1	1.0 ± 4.8 2.8 ± 4.7	0.0 ± 4.8 0.0 ± 4.5
20A	Feather River	blw Shanghai Bend	5/15 9/10	0.0 ± 0.2 0.1 ± 0.1	0.1 ± 0.2 0.2 ± 0.1	8.4 ± 4.9 4.9 ± 4.4	0.0 ± 4.7 4.9 ± 4.4
20B	Bear River	Mouth	5/15	0.0 ± 0.2	0.0 ± 0.2	7.2 ± 4.8	5.3 ± 4.8
21	Yuba River	Marysville	5/15 9/10	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	5.0 ± 4.9 0.0 ± 4.6	3.0 ± 4.9 0.0 ± 4.5
21A	Yuba River	Smartville	5/15 9/10	0.0 ± 0.2 0.1 ± 0.1	0.0 ± 0.2 0.0 ± 0.1	3.4 ± 4.9 5.6 ± 4.6	0.0 ± 4.9 0.0 ± 4.5
22	American River	Sac-H St Brdg	5/10 9/11	0.0 ± 0.1 0.0 ± 0.2	0.0 ± 0.1 0.0 ± 0.1	4.4 ± 4.7 1.0 ± 4.5	0.0 ± 4.6 0.0 ± 4.4
22A	American River	Nimbus Dam	5/10 9/11	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 0.2 0.0 ± 0.1	4.2 ± 4.7 7.4 ± 4.6	6.9 ± 4.7 3.4 ± 4.5
22B	American R, MF	Auburn	5/10 9/11	0.1 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	10.0 ± 4.9 6.6 ± 4.7	7.7 ± 4.8 1.3 ± 4.6
22C	American R, SF	Lotus	5/10 9/11	0.0 ± 0.2 0.2 ± 0.2	0.1 ± 0.3 0.0 ± 0.1	1.9 ± 4.7 0.0 ± 4.7	11.0 ± 4.8 0.0 ± 4.7
23	Mokelumne River	Woodbridge	5/10 9/6	0.2 ± 0.2 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	0.2 ± 4.8 6.6 ± 4.6	1.1 ± 4.8 0.1 ± 4.5

TABLE B-32

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5) (continued)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
23A	Mokelumne River	Lancha Plana	5/10 9/5	0.0 ± 0.1 0.1 ± 0.1	0.0 ± 0.2 0.0 ± 0.1	4.3 ± 4.8 10.6 ± 4.8	0.0 ± 4.8 0.9 ± 4.7
24	San Joaquin R	Friant	5/7 9/4	0.1 ± 0.3 0.1 ± 0.2	0.0 ± 0.2 0.1 ± 0.2	3.3 ± 4.7 5.1 ± 5.0	4.6 ± 4.7 0.0 ± 4.9
24C	Salt Slough	San Luis Ranch	5/1 9/7	0.6 ± 0.3 0.3 ± 0.2	1.2 ± 0.4 0.7 ± 0.3	7.8 ± 4.6 11.4 ± 4.8	5.6 ± 4.6 4.8 ± 4.7
25	San Joaquin R	Mendota	5/1 9/7	0.2 ± 0.2 0.4 ± 0.2	1.0 ± 0.4 0.2 ± 0.2	2.2 ± 4.7 2.0 ± 4.9	5.6 ± 4.8 0.0 ± 4.8
25B	San Joaquin R	Hills Ferry Brg	5/1 9/7	0.2 ± 0.3 0.4 ± 0.2	0.3 ± 0.3 0.7 ± 0.3	0.0 ± 4.6 4.8 ± 5.0	2.2 ± 4.7 2.1 ± 5.0
25C	San Joaquin R	Fremont Ford Brg	5/1 9/7	0.6 ± 0.3 0.7 ± 0.3	0.5 ± 0.3 0.5 ± 0.2	0.0 ± 4.6 7.8 ± 4.9	3.1 ± 4.9 0.0 ± 4.8
26	San Joaquin R	Grayson	5/9 9/3	0.6 ± 0.3 0.6 ± 0.2	1.2 ± 0.4 0.3 ± 0.2	3.9 ± 4.8 14.7 ± 5.0	10.9 ± 4.8 0.4 ± 4.8
26A	San Joaquin R	Maze Road Brg	5/9 9/8	0.4 ± 0.3 0.1 ± 0.2	0.6 ± 0.3 0.5 ± 0.3	8.0 ± 4.8 2.9 ± 4.8	4.3 ± 4.6 3.6 ± 4.8
26B	San Joaquin R	Crows Landing Br	5/1 9/6	0.3 ± 0.2 0.7 ± 0.3	0.3 ± 0.2 0.7 ± 0.3	0.0 ± 4.3 6.0 ± 4.8	0.0 ± 4.3 5.4 ± 4.8
27	San Joaquin R	Vernalis	5/1 9/6	0.1 ± 0.2 0.4 ± 0.2	0.3 ± 0.3 0.4 ± 0.2	0.0 ± 4.2 10.6 ± 5.0	0.0 ± 4.2 3.4 ± 4.8
27A	San Joaquin R	Patterson	5/1 9/6	0.5 ± 0.4 0.5 ± 0.3	0.1 ± 0.3 0.2 ± 0.2	0.0 ± 4.6 8.6 ± 4.9	2.7 ± 4.7 5.1 ± 4.9
28	San Joaquin R	Antioch	5/8 9/5	0.0 ± 0.2 0.0 ± 0.2	0.3 ± 0.3 0.2 ± 0.2	3.9 ± 4.7 11.5 ± 5.0	0.0 ± 4.6 0.0 ± 4.8

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5) (continued)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
29	Stanislaus River	Mouth	5/1 9/6	0.3 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.1 ± 0.1	6.4 ± 4.4 4.3 ± 4.8	1.8 ± 4.4 0.0 ± 4.7
29A	Stanislaus River	blw Tulloch Dam	5/10 9/4	0.2 ± 0.2 0.1 ± 0.1	0.0 ± 0.2 0.1 ± 0.1	0.0 ± 4.5 6.3 ± 4.8	3.2 ± 4.7 5.0 ± 4.8
30	Tuolumne River	at Hickman- Waterford Brg	9/8	0.1 ± 0.2	0.1 ± 0.2	5.3 ± 4.5	0.0 ± 4.4
31	Tuolumne River	Tuolumne City	5/9 9/8	0.6 ± 0.3 0.2 ± 0.2	0.2 ± 0.2 0.1 ± 0.2	3.6 ± 4.6 7.8 ± 4.8	0.0 ± 4.5 0.0 ± 4.6
31A	Tuolumne River	blw Don Pedro Dam	5/9 9/8	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	2.6 ± 4.4 12.1 ± 4.9	0.0 ± 4.3 6.2 ± 4.8
32	Merced River	Stevinson	5/1 9/7	0.2 ± 0.3 0.4 ± 0.2	0.7 ± 0.3 0.1 ± 0.2	0.0 ± 4.6 6.0 ± 4.9	0.6 ± 4.6 4.0 ± 4.8
32A	Merced River	blw Exchequer Dam	5/10 9/4	0.0 ± 0.2 0.0 ± 0.1	0.1 ± 0.2 0.2 ± 0.2	0.0 ± 4.5 3.2 ± 4.8	0.0 ± 4.4 0.0 ± 4.9
33B	Kings River	blw Pine Flat Dam	5/1 9/3	0.1 ± 0.2 0.0 ± 0.2	0.1 ± 0.2 0.0 ± 0.2	1.5 ± 4.5 3.0 ± 4.9	4.3 ± 4.6 0.0 ± 4.8
33C	Kings River	blw North Fork	5/1 9/3	0.2 ± 0.2 0.1 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	3.6 ± 4.9 0.0 ± 4.9	0.0 ± 4.9 0.0 ± 4.9
33D	Big Creek	abv Pine Flat Dam	5/1	0.1 ± 0.2	0.1 ± 0.2	2.9 ± 4.5	2.3 ± 4.5
34	Kings River	blw Peoples Weir	5/8 9/5	0.0 ± 0.2 0.1 ± 0.1	0.1 ± 0.2 0.0 ± 0.1	0.8 ± 4.8 0.0 ± 4.8	0.0 ± 4.8 0.0 ± 4.8
35	Kaweah River	blw Terminus Dam	5/8 9/5	0.0 ± 0.2 0.1 ± 0.2	0.1 ± 0.2 0.0 ± 0.1	4.7 ± 4.5 11.0 ± 4.8	2.4 ± 4.5 2.6 ± 4.7

TABLE B-32

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5) (continued)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
36	Kern River	Bakersfield	5/8 9/5	0.4 ± 0.3 0.4 ± 0.2	0.2 ± 0.2 0.1 ± 0.2	0.0 ± 4.6 2.8 ± 5.0	1.7 ± 4.6 0.0 ± 4.9
36A	Kern River	blw Isabella Dam	5/1 9/4	0.0 ± 0.2 0.0 ± 0.1	0.6 ± 0.3 0.2 ± 0.2	2.4 ± 4.3 5.9 ± 4.9	1.7 ± 4.3 5.2 ± 4.8
36B	Kern River	Kernville	5/1 9/4	0.3 ± 0.3 0.4 ± 0.2	0.6 ± 0.3 0.0 ± 0.1	9.7 ± 4.3 6.2 ± 4.9	6.1 ± 4.2 0.0 ± 4.8
41	Clear Lake	Lakeport	5/2 9/4	0.0 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	1.4 ± 4.8 10.3 ± 4.8	0.0 ± 4.8 1.9 ± 4.7
42	Cache Creek	Lower Lake	5/2 9/4	0.1 ± 0.2 0.1 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	4.2 ± 4.8 4.1 ± 4.7	0.0 ± 4.6 0.0 ± 4.6
78	Bear River	Wheatland	5/15 9/10	0.2 ± 0.2 0.0 ± 0.1	0.1 ± 0.1 0.0 ± 0.1	1.8 ± 4.8 6.3 ± 4.8	0.0 ± 4.7 0.0 ± 4.7
79	Cache Creek, NF	Lower Lake	5/2 9/4	0.0 ± 0.2 0.1 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 4.7 6.1 ± 4.7	0.0 ± 4.7 2.1 ± 4.6
80	Cache Creek	Capay	5/2 9/4	0.0 ± 0.1 0.1 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	2.5 ± 4.7 5.0 ± 4.7	3.0 ± 4.7 0.0 ± 4.6
81	Putah Creek	Winters	5/3 9/4	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 4.7 0.0 ± 4.6	0.0 ± 4.7 0.0 ± 4.6
85A	Big Chico Creek	Chico	5/14	0.0 ± 0.2	0.0 ± 0.2	2.9 ± 4.7	0.0 ± 4.6
87	Colusa Trough	Colusa	5/7 9/19	0.0 ± 0.2 0.0 ± 0.1	0.1 ± 0.2 0.4 ± 0.2	5.3 ± 4.8 1.3 ± 4.8	5.8 ± 4.8 2.7 ± 4.8
87A	Sacramento River	Butte City	5/7 9/19	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 4.6 3.0 ± 4.8	3.3 ± 4.6 2.9 ± 4.8

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5) (continued)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
88A	Cow Creek	Millville	5/3 9/14	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 4.8 9.9 ± 4.9	0.0 ± 4.8 6.2 ± 4.9
88B	Battle Creek	Cottonwood	5/3 9/11	0.1 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	3.4 ± 4.8 6.0 ± 4.7	0.0 ± 4.8 1.4 ± 4.6
88C	Antelope Creek	Mouth	5/1 9/11	0.0 ± 0.2 0.1 ± 0.1	0.0 ± 0.2 0.0 ± 0.1	7.8 ± 4.6 4.3 ± 4.9	7.7 ± 4.6 0.0 ± 4.8
88D	Redbank Creek	Red Bluff	5/17	0.1 ± 0.2	0.0 ± 0.2	7.1 ± 4.7	1.9 ± 4.6
88E	Antelope Creek	Red Bluff	5/1 9/11	0.0 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	0.4 ± 4.1 1.1 ± 4.8	0.0 ± 4.1 0.0 ± 4.7
88G	Paynes Creek	Red Bluff	5/3 9/11	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 0.1 0.0 ± 0.2	5.8 ± 4.4 2.1 ± 4.5	2.3 ± 4.4 0.1 ± 4.5
91	Tule River	blw Success Dam	5/10 9/13	0.0 ± 0.2 0.3 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 4.3 11.9 ± 5.0	0.0 ± 4.3 0.0 ± 4.8
92	Delta Mendota Canal	Mendota	5/1 9/7	0.2 ± 0.2 0.1 ± 0.1	0.0 ± 0.1 0.5 ± 0.2	0.5 ± 4.8 8.8 ± 5.0	0.0 ± 4.8 2.9 ± 4.9
93	Delta Mendota Canal	Tracy	5/8 9/6	0.1 ± 0.2 0.0 ± 0.1	0.5 ± 0.3 1.1 ± 0.3	8.0 ± 4.4 11.7 ± 4.6	13.4 ± 4.5 6.3 ± 4.5
94	Cosumnes River	Michigan Bar	5/10 9/11	0.0 ± 0.2 0.0 ± 0.1	0.0 ± 0.2 0.0 ± 0.1	3.8 ± 4.7 4.5 ± 4.6	1.1 ± 4.6 2.1 ± 4.5
94A	Cosumnes River	McConnell	5/10	0.2 ± 0.2	0.2 ± 0.2	4.3 ± 4.9	2.5 ± 4.9
95A	Elder Creek	Gerber	5/7	0.0 ± 0.2	0.0 ± 0.2	0.0 ± 4.4	0.0 ± 4.4
95B	Thomes Creek	Mouth	5/7	0.0 ± 0.1	0.1 ± 0.2	1.2 ± 4.4	0.0 ± 4.3

TABLE B-32

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5) (continued)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
99	Little Potato Sl	Terminous	5/9 9/4	0.1 ± 0.2 0.0 ± 0.1	0.0 ± 0.1 0.1 ± 0.1	0.0 ± 4.8 6.0 ± 4.7	0.0 ± 4.8 0.0 ± 4.6
102	San Joaquin R	Mossdale Bridge	5/7 9/6	0.0 ± 0.3 0.2 ± 0.1	0.0 ± 0.3 0.3 ± 0.2	3.3 ± 4.6 23.0 ± 4.9	6.0 ± 4.7 2.1 ± 4.6
103	Old River	Tracy	5/7 9/6	0.3 ± 0.3 0.6 ± 0.3	0.3 ± 0.3 0.8 ± 0.3	3.0 ± 4.6 5.1 ± 4.6	2.2 ± 4.6 2.8 ± 4.6
103A	Grant Line Canal	Tracy Road Brg	5/7	0.0 ± 0.2	0.8 ± 0.4	1.3 ± 4.6	3.5 ± 4.7
104	Old River	Clifton Ct Ferry	5/28 9/6	0.2 ± 0.2 0.1 ± 0.2	0.3 ± 0.2 0.1 ± 0.2	8.2 ± 4.5 0.3 ± 4.5	7.9 ± 4.5 0.0 ± 4.5
106	Italian Slough	Mouth	5/8 9/6	0.1 ± 0.2 0.1 ± 0.2	0.3 ± 0.2 0.2 ± 0.2	3.1 ± 4.8 3.7 ± 4.4	0.0 ± 4.7 1.6 ± 4.4
107	Indian Slough	Brentwood	5/8 9/6	0.0 ± 0.1 0.2 ± 0.2	0.5 ± 0.2 0.2 ± 0.2	0.0 ± 4.7 11.7 ± 4.8	0.4 ± 4.7 4.3 ± 4.7
108	Old River	Orwood Bridge	5/8 9/6	0.0 ± 0.2 0.1 ± 0.1	0.5 ± 0.3 0.2 ± 0.2	1.4 ± 4.5 7.4 ± 4.6	4.5 ± 4.6 0.9 ± 4.5
109	Rock Slough	Knightesen	5/8 9/6	0.0 ± 0.2 0.1 ± 0.2	0.2 ± 0.2 0.2 ± 0.2	9.8 ± 4.7 4.0 ± 4.8	1.1 ± 4.5 0.0 ± 4.6
113	Fresno River	Daulton	5/7	0.1 ± 0.2	0.5 ± 0.3	0.2 ± 4.4	5.7 ± 4.5
114	Chowchilla River	Raymond	5/7	0.0 ± 0.2	0.0 ± 0.2	0.0 ± 4.6	0.0 ± 4.6

RADIOASSAY OF SURFACE WATERS

LAHONTIAN REGION (NO. 6)

Sto. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
17B	Susan River	Susanville	5/2 9/18	0.2 ± 0.2 0.1 ± 0.2	0.0 ± 0.1 0.0 ± 0.1	0.0 ± 4.4 15.5 ± 5.1	0.0 ± 4.5 2.2 ± 4.9
37	Lake Tahoe	Tahoe Vista	5/9 9/12	0.0 ± 0.2 0.2 ± 0.2	0.0 ± 0.2 0.1 ± 0.2	0.4 ± 4.7 4.3 ± 4.8	2.3 ± 4.7 4.5 ± 4.8
38	Lake Tahoe	Tahoe City	5/9 9/12	0.1 ± 0.2 0.0 ± 0.2	0.2 ± 0.2 0.0 ± 0.1	0.0 ± 4.9 6.4 ± 4.4	0.0 ± 4.9 5.0 ± 4.4
39	Lake Tahoe	Bijou	5/10 9/13	0.1 ± 0.2 0.2 ± 0.2	0.2 ± 0.2 0.1 ± 0.2	0.0 ± 4.8 3.4 ± 4.6	0.0 ± 4.8 0.2 ± 4.5
52	Truckee River	Truckee	5/9 9/12	0.1 ± 0.1 0.3 ± 0.2	0.0 ± 0.1 0.0 ± 0.1	0.0 ± 4.6 8.0 ± 4.8	0.0 ± 4.6 0.0 ± 4.7
53	Truckee River	Farad	5/11 9/14	0.0 ± 0.2 0.1 ± 0.2	0.0 ± 0.2 0.1 ± 0.2	1.6 ± 4.8 3.1 ± 5.0	3.1 ± 4.8 0.0 ± 4.9
67	Mojave River	Victorville	5/14 9/12	0.8 ± 0.3 0.6 ± 0.3	0.3 ± 0.2 0.5 ± 0.3	10.2 ± 4.8 6.2 ± 4.9	6.4 ± 4.7 9.4 ± 4.9
67A	Mojave River	The Forks	5/14 9/12	0.5 ± 0.3 0.2 ± 0.2	0.0 ± 0.2 0.0 ± 0.1	10.1 ± 4.9 5.0 ± 4.6	8.1 ± 4.9 2.1 ± 4.6
115	Carson River, EF	Markleeville	5/10 9/13	0.0 ± 0.2 0.0 ± 0.2	0.2 ± 0.3 0.0 ± 0.2	5.5 ± 4.8 6.1 ± 4.8	5.4 ± 4.8 4.0 ± 4.8
115A	Carson River, WF	Woodfords	5/10 9/13	0.1 ± 0.2 0.4 ± 0.2	0.4 ± 0.2 0.2 ± 0.2	3.1 ± 4.8 5.1 ± 4.7	5.7 ± 4.8 0.0 ± 4.6
116	West Walker R	Coleville	5/10 9/13	0.0 ± 0.2 0.3 ± 0.2	0.2 ± 0.3 0.2 ± 0.1	0.0 ± 4.7 3.3 ± 4.6	3.8 ± 4.8 0.0 ± 4.6
116A	East Walker R	Bridgeport	5/10 9/13	0.3 ± 0.2 0.4 ± 0.2	0.0 ± 0.2 0.2 ± 0.2	7.8 ± 5.0 16.2 ± 4.9	0.0 ± 4.8 8.9 ± 4.8

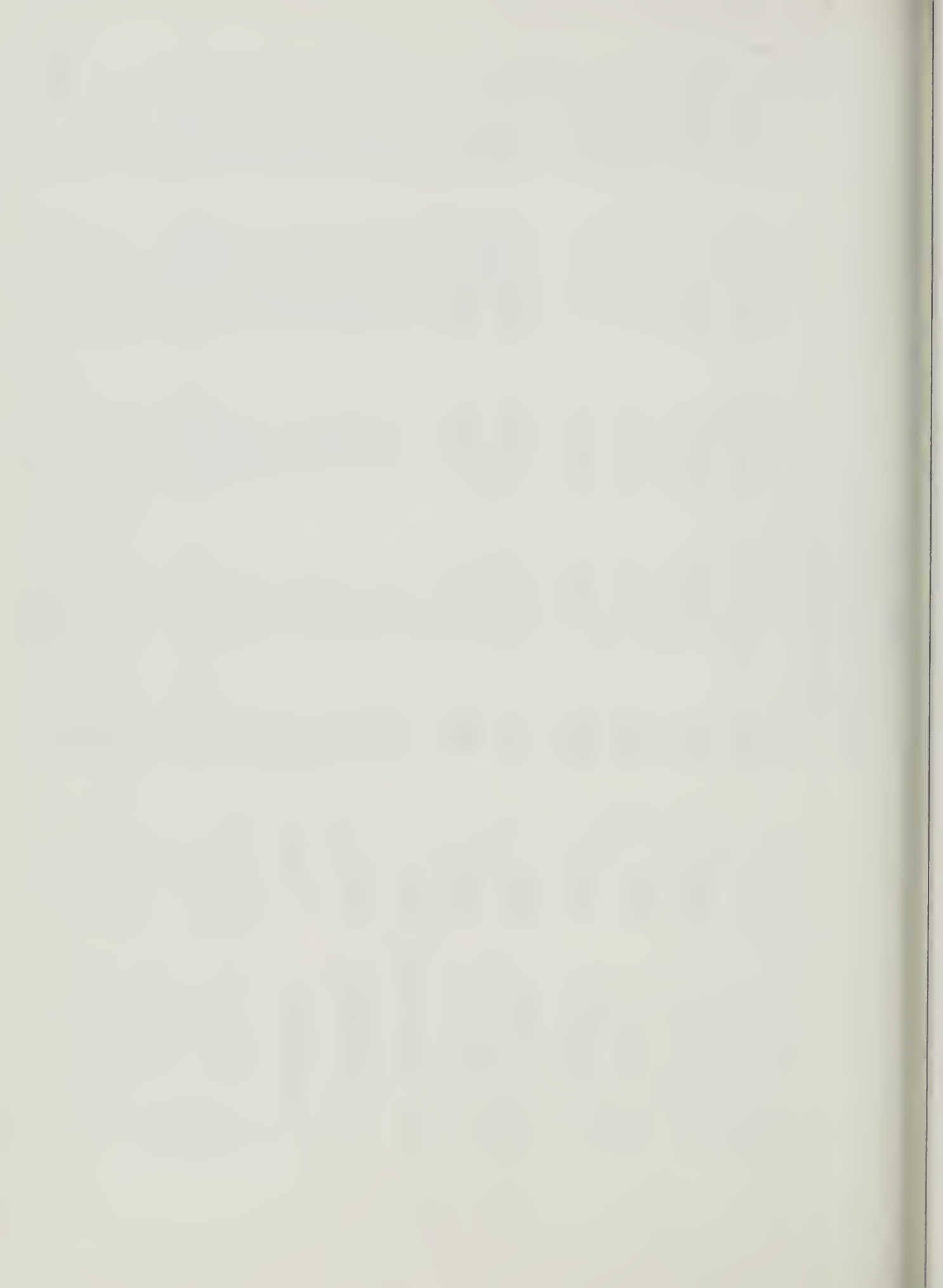


TABLE B-34

RADIOASSAY OF SURFACE WATERS

COLORADO RIVER BASIN REGION (NO. 7)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
54	Colorado River	Topock, Arizona	5/15 9/17	0.6 ± 0.3 0.4 ± 0.2	0.0 ± 0.2 0.1 ± 0.1	12.9 ± 4.9 14.9 ± 5.4	3.4 ± 4.8 0.0 ± 5.2
55	Colorado River	blw Parker Dam	5/15 9/18	0.6 ± 0.3 0.5 ± 0.3	0.0 ± 0.2 0.0 ± 0.2	14.4 ± 5.0 11.2 ± 5.4	0.0 ± 4.8 0.0 ± 5.3
56	Colorado River	Yuma, Arizona	9/5	0.2 ± 0.2	0.1 ± 0.2	9.5 ± 5.4	0.0 ± 5.2
56A	All American Canal	Pilot Knob	5/16 9/5	0.5 ± 0.3 0.9 ± 0.3	0.1 ± 0.2 0.2 ± 0.2	11.8 ± 4.8 10.1 ± 4.5	0.0 ± 4.6 4.0 ± 4.4
56B	Colorado River	blw Morelos Dam	5/16 9/5	0.0 ± 0.2 0.0 ± 0.2	0.0 ± 0.2 0.0 ± 0.2	7.4 ± 4.9 10.2 ± 4.4	2.3 ± 4.8 7.2 ± 4.4
56C	Colorado River	Blythe	5/15 9/18	0.6 ± 0.3 0.6 ± 0.3	0.0 ± 0.2 0.1 ± 0.1	4.0 ± 4.9 7.4 ± 4.8	0.0 ± 4.9 0.0 ± 4.7
57	New River	Int'l Boundary	5/10 9/5	0.1 ± 0.2 0.0 ± 0.2	0.2 ± 0.2 1.1 ± 0.3	6.1 ± 4.8 20.2 ± 4.7	2.7 ± 4.7 3.9 ± 4.5
58	New River	Westmoreland	5/10 9/4	0.0 ± 0.2 0.0 ± 0.2	0.6 ± 0.3 1.0 ± 0.3	11.5 ± 4.9 7.2 ± 4.5	18.8 ± 5.0 15.9 ± 4.6
59	Alamo River	Int'l Boundary	5/10 9/5	0.0 ± 0.2 0.0 ± 0.2	0.1 ± 0.3 0.0 ± 0.2	11.1 ± 4.8 4.2 ± 4.4	5.0 ± 4.7 0.0 ± 4.4
60	Alamo River	Calipatria	5/10 9/4	0.3 ± 0.2 0.0 ± 0.2	0.9 ± 0.3 0.7 ± 0.3	2.5 ± 4.9 8.6 ± 4.6	6.2 ± 4.9 8.8 ± 4.6
68	Whitewater River	Whitewater	5/10 9/4	0.9 ± 0.3 1.2 ± 0.3	0.0 ± 0.1 0.1 ± 0.1	0.3 ± 4.8 19.1 ± 4.8	0.0 ± 4.7 0.0 ± 4.5

TABLE B-34
RADIOASSAY OF SURFACE WATERS
COLORADO RIVER BASIN REGION (NO. 7) (continued)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
68A	Salton Sea	State Park	5/10 9/4	0.1 \pm 0.1	0.1 \pm 0.1	4.8 \pm 4.8	0.5 \pm 4.7
				0.0 \pm 0.1	0.0 \pm 0.2	10.9 \pm 4.6	0.0 \pm 4.5
68B	Whitewater River	Mecca	5/10 9/4	0.3 \pm 0.2	1.4 \pm 0.4	15.3 \pm 5.0	16.9 \pm 5.0
				0.0 \pm 0.1	0.7 \pm 0.3	12.6 \pm 4.7	20.1 \pm 4.8

TABLE B-35

RADIOASSAY OF SURFACE WATERS

SANTA ANA REGION (NO. 8)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
50B	Warm Creek	Colton-F Street	5/7 9/4	0.0 \pm 0.2 0.1 \pm 0.1	0.2 \pm 0.3 0.4 \pm 0.2	12.7 \pm 4.9 12.3 \pm 4.6	1.7 \pm 4.7 0.0 \pm 4.5
51	Santa Ana River	Arlington	5/7 9/12	0.8 \pm 0.3 0.7 \pm 0.3	0.2 \pm 0.2 0.2 \pm 0.2	14.0 \pm 4.9 11.0 \pm 4.5	0.5 \pm 4.7 4.7 \pm 4.3
51A	Santa Ana River	Prado Dam	5/7 10/4	0.5 \pm 0.3 0.4 \pm 0.2	0.3 \pm 0.3 0.9 \pm 0.3	12.8 \pm 4.9 12.4 \pm 4.6	7.9 \pm 4.9 4.0 \pm 4.5
51B	Santa Ana River	Mentone	5/7 9/12	1.7 \pm 0.4 1.9 \pm 0.5	0.7 \pm 0.3 0.1 \pm 0.2	4.8 \pm 4.7 9.9 \pm 5.2	8.4 \pm 4.8 0.0 \pm 5.0
51E	Santa Ana River	Norco	5/7 9/12	0.0 \pm 0.2 0.6 \pm 0.2	0.2 \pm 0.2 0.3 \pm 0.2	1.7 \pm 4.6 9.5 \pm 4.6	2.8 \pm 4.6 0.0 \pm 4.4
86	Chino Creek	Chino	5/7	0.0 \pm 0.2	0.2 \pm 0.2	20.6 \pm 5.1	6.3 \pm 4.9

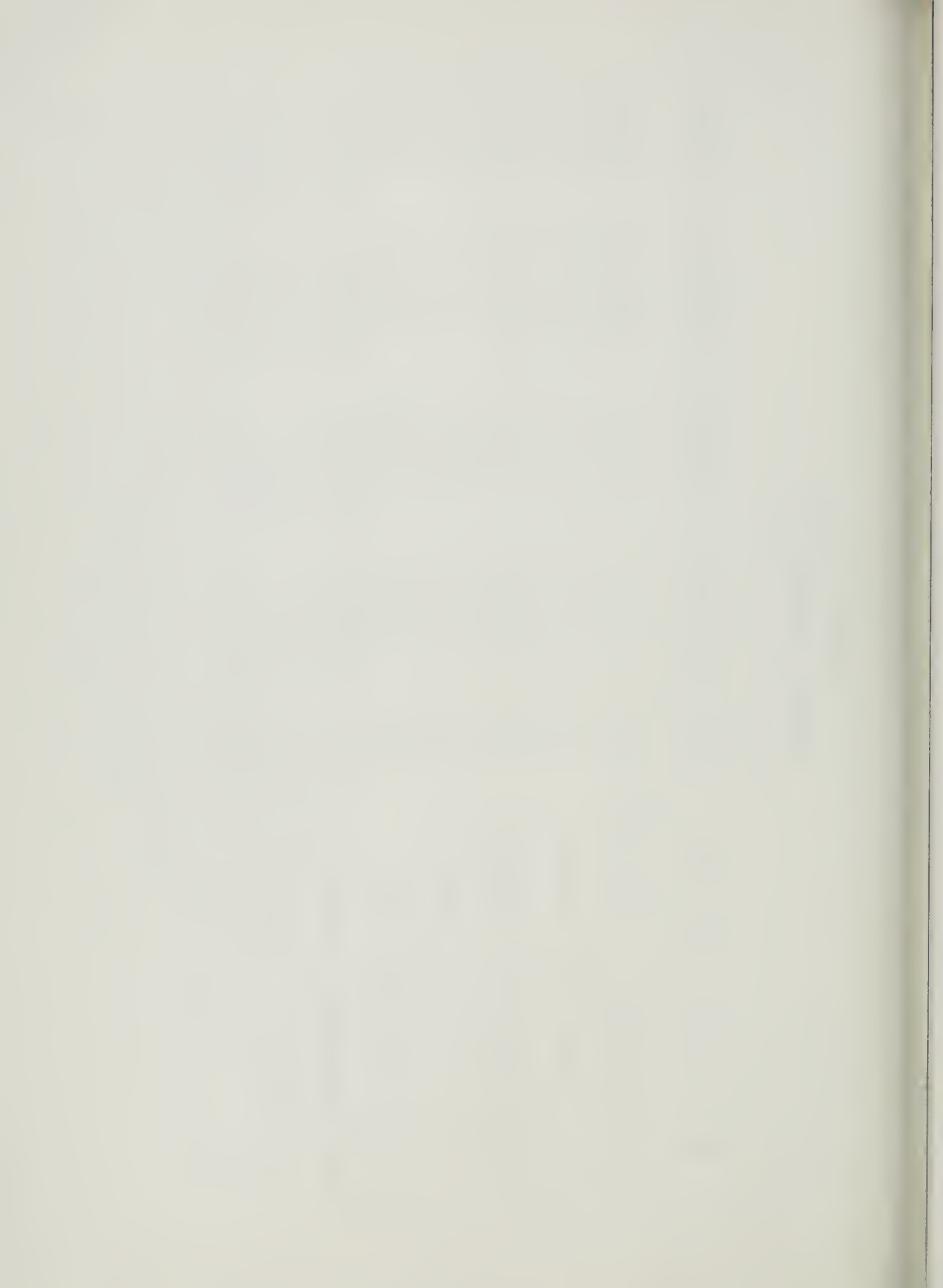


TABLE B-36

RADIOASSAY OF SURFACE WATERS

SAN DIEGO REGION (NO. 9)

Sta. No.	Stream	Near	Date 1962	Micro-micro curies per liter			
				Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
63	Escondido Creek	Harmony Grove	9/6	0.2 \pm 0.2	0.5 \pm 0.2	22.3 \pm 5.3	1.0 \pm 5.0
65	San Diego River	Old Mission Dam	5/9	0.1 \pm 0.2	0.8 \pm 0.3	9.3 \pm 4.9	0.0 \pm 4.8
65B	Spring Valley Cr	La Pressa	5/9	0.0 \pm 0.1	1.5 \pm 0.4	6.0 \pm 4.8	5.0 \pm 4.8
			9/6	0.0 \pm 0.1	1.4 \pm 0.4	19.3 \pm 5.1	12.5 \pm 5.0
65C	San Diego River	Mission Gorge Rd	9/6	0.0 \pm 0.1	1.2 \pm 0.3	18.3 \pm 5.1	4.0 \pm 5.0



TABLE B-37
DESCRIPTION OF SALINITY OBSERVATION STATIONS
1961-62 Water Year

Station	Miles from Golden Gate (a)	Time Interval (b)		Location
		Hours	Min.	
SAN FRANCISCO, SAN PABLO, AND SUISUN BAYS				
Sobrante Beach	20.5	2	50	South shore of San Pablo Bay from wharf approximately 1.5 miles upstream from Point Pinole.
Crockett	27.7	3	30	West end of Carquinez Strait, south shore, 0.2 mile east of Carquinez Bridge on wharf of C. and H. Sugar Refinery Corporation.
Benicia	32.5	3	50	East end of Carquinez Strait, north shore, 1.1 miles west of Southern Pacific Company railroad bridge at Benicia Arsenal.
Martinez (c)	32.7	3	50	East end of Carquinez Strait, south shore, 1.0 mile west of Southern Pacific Company railroad bridge at Municipal Ferry Slip. (Bulls Head Point.)
West Suisun	37.0	4	10	West end of Suisun Bay, north shore, 2.5 miles northeast of Southern Pacific railroad bridge at service pier of U. S. Maritime Commission, Reserve Fleet mooring area.
Innisfail Ferry	47.3	4	50	Montezuma Slough, about one east of junction with Cutoff Slough near north end of Grizzly Island.
Port Chicago	41.0	4	20	South shore of Suisun Bay at U. S. Naval ammunition loading wharf below Port Chicago.
Spoonbill Creek	48.9	5	05	At Sacramento Northern Railroad crossing.
Pittsburg	48.0	5	00	East end of Suisun Bay, south shore, at Pittsburg Yacht Harbor.
SACRAMENTO RIVER DELTA				
Collinsville	50.8	5	25	Sacramento River, north bank at junction with San Joaquin River.
Emmerton	57.6	5	45	Sacramento River, south bank, 5.9 miles downstream from Rio Vista.
Threemile Slough Bridge	60.0	5	55	At junction of slough and Sacramento River.
Rio Vista Bridge	63.5	6	05	At highway bridge near northerly limits of Rio Vista.
Isleton Bridge	68.7	6	30	Sacramento River, one mile upstream from Isleton.
SAN JOAQUIN RIVER DELTA				
Antioch	54.9	5	55	San Joaquin River at City Water Works pumping plant.
Antioch Bridge	58.2	6	10	South shore San Joaquin River at Antioch Bridge.
Jersey Island	60.9	6	20	San Joaquin River, left bank approximately 1.5 miles below mouth of False River.
Threemile Slough	64.2	6	30	Threemile Slough, west bank, of junction of slough with the San Joaquin River.
Oulton Point	67.2	6	40	San Joaquin River, right bank, three miles upstream from junction of Threemile Slough.
San Andreas Landing	70.3	6	55	San Joaquin River, right bank, one mile below the mouth of the Mokelumne River.
Opposite Central Landing	72.0	7	00	Mokelumne River on Andrus Island directly opposite Central Landing on Bouldin Island.
Dutch Slough	73.0	7	05	At Bethel Island Bridge.
East Contra Costa Irrigation District	86.7	8	20	Indian Slough at East Contra Costa Irrigation District pumping plant.
Clifton Court Ferry	94.2	9	10	Old River just below junction with Grant Line Canal.
Mossdale Bridge	108.5	10	50	San Joaquin River at U. S. 50 Highway crossing about three miles southwest of Lathrop.
Vernalis	127.0	11	00	San Joaquin River at Durham Ferry Bridge above tidal influence.

- a Mileage measured to station along main channel. For stations off the main channel, the mileage shown is the same distance along the main channel to a point where the time of the occurrence of the tidal phase is the same as that of the observation station.
- b Time interval between high tide at Golden Gate and time for taking samples at station.
- c As of September 22, 1962, sampled from Shell Oil Company dock, about 0.6 mile downstream from Southern Pacific Company railroad bridge.



TABLE B-36

MAXIMUM OBSERVED SALINITY AT BAY AND DELTA STATIONS

In parts of chloride per million parts of water*

Station (a)	Water Year											
	1931	1938	1939	1944 ^b	1952	1955	1956 ^c	1958	1959	1960	1961	1962
Sacramento-San Joaquin System Unimpaired Runoff in percent of average (d)	34	188	49	62	168	63	175	166	66	70	61	
San Francisco, San Pablo, and Suisun Bays												
Sobrante Beach**					14200	19000	16200	13800	17200	16400	15000	15600
Crockett					13200	16600	15300	11900	15000	13500	19900	13900
Benicia				13900	10400	15100	12300	12100	19200	13000	14000	12300
Martinez	16900	11600	16400		8900	11900	11900	7150	10200	8750	11600	12700
West Suisun					7900	12600	11200	7520	13200	11100	13200	11100
Innisfail Ferry	14000	3300	13600	7900	4200	5780	5200	3040	9640	6610	13900	5690
Port Chicago					6900	12500	9750	5830	15640	10700	11900	9370
Spoonbill Creek	13900	2560	11800	7300	2800	6400	4040	930	6270	5040	5900	3540
Pittsburg					1200	7800	3440	1200	5110	3700	3920	3980
Sacramento River Delta												
Collierville	12600	860	10400	4700	783	3880	2280	550	5430	4500	4300	2430
Emmaton						1080	158	29	2600	1580	2070	841
Threemile Slough Bridge	8600		5900	1610	175	635	56	18	1480	807	633	232
Rio Vista Bridge	7400		4050	550	175	158	21	17	219	87	69	52
Isleton Bridge	6350		2500	50	125	23	17	14	20	19	18	18
San Joaquin River Delta												
Antioch	12400	510	9200	4000	354	3320	1270	184	3410	2800	2930	1770
Antioch Bridge						2360	160	122	2570	1490	1360	479
Jersey Island						1130	152	52	1220	e	e	84
Threemile Slough						428	82	45	1900	451	489	130
Oulton Point						376	105	44	567	406	596	150
San Andreas Landing						98	66	46	248	125	345	57
Opposite Central Landing	4250	100	1380	200	250	36	96	17	46	58	34	27
Dutch Slough	5100	110	2250	690	88	454	107	110	1044	548	825	192
East Contra Costa Irrigation District			320	140	152	196	173	333	356	227	278	222
Clifton Court Ferry	1300		190		112	146	146	126	211	173	191	246
Mossdale Bridge	120	120	160	130	122	224	206	219	261	318	346	308
Vernalis (f)					121	231	202	146	297	206	508	309

* Ocean water contains approximately 18,200 parts per million.

** Prior to 1942 water year, the samples were collected at Point Pinole, 1.5 miles downstream from present station.

a For location see Plate

b Releases of stored water from Shasta Lake commenced in 1944.

c Releases of stored water from Folsom Reservoir commenced in 1951.

d Average taken as mean annual unimpaired flow at foothill stations of major tributaries for 50-year period October 1907 through September 1957.

e No record.

f Station located above tidal action.



TABLE R-39
SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	October 1961							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach								
Crockett		12200	12900	12200	12700	13800	13900	11300
Benicia	11100	10800	10800		12100	10600	11400	7650
Martinez	10900	12700	11400	12100	11400	12500	12700	10200
West Suisun	8940		a 8910		10300	7480	10300	
Ionisfail Ferry	a 5540	5000	d 5250	5000	a 5240	d 5420	4260	a 5470
Port Chicago	7180	7640	8580	9090		7490	8260	6400
Spoonbill Creek	3540	2980	2940	2980	3520	2960	3440	3140
Pittsburg	a 1690	2300	c 2180		ab 3980		2850	d 1090
Sacramento River Delta								
Collinsville		1950	2100	a 1660	a 2180		a 1870	1690
Emmerton	a 310	470	535	a 468	a 677	841	a 771	207
Threemile Slough Bridge	b 95	91	a 82	173	b 209	150	232	80
Rio Vista Bridge	b 14	19	13	16			13	11
Isleton Bridge	b 17	13	14	11	b 12	12	10	9
San Joaquin River Delta								
Antioch	a 836	1180	1140	1270	a 1770	1520	1690	535
Antioch Bridge	a 126	208	199	237	a 273	229	214	156
Jersey Island			80	a 47				67
Threemile Slough			81	a 59		b 92	a 63	
Oulton Point	a 64		23	a 21	a 22	14	27	23
San Andreas Landing	a 23	17	14	a 12		14	a 14	12
Opposite Central Landing	a 16	15		a 104	a 105	124	a 112	92
Dutch Slough	a 126	114	a 116	a 109	a 107	121	a 107	111
East Contra Costa Irrigation District	a 113	96	a 100	a 58	a 61	a 77	a 55	59
Clifton Court Ferry	a 63	58	a 60	a 292	a 264	a 280	a 251	234
Mossdale Bridge	a 283	a 308	a 290	b 243	a 309	a 262	a 244	233
Vernalis (g)	a 292	304						
Station	November 1961							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	14500	d 14100	d 14200	d 13000	d 13500		d 13700	d 13800
Crockett	11800	12400	13000	11400	12200	12100		8700
Benicia	9690	8720	11300	9720	11100			10600
Martinez	10200	b 11900	9980	10000	11600	9140	7360	a 5040
West Suisun	ae 8530	7110			6350			5000
Ionisfail Ferry	5690	5290	5040	5070	4840	4840	b 5350	a 4820
Port Chicago		7190	8540	6450	6160	6970		2500
Spoonbill Creek	3170	3240	3500	2870	2980	3150	3170	2610
Pittsburg		1860		a 814	2170			
Sacramento River Delta								
Collinsville	2060	1520	d 1650	a 1510	1840	1400	a 1320	1210
Emmerton	451	446	a 425	a 352	d 358	455	a 395	278
Threemile Slough Bridge	97	63	139	43	81	67	66	67
Rio Vista Bridge	9	8	11	10	17	15	11	15
Isleton Bridge	2	8	10	12		9	8	12
San Joaquin River Delta								
Antioch	1080	920	1220	1140	949	1110	1210	963
Antioch Bridge	138	113	157	a 112	107	103	a 168	129
Jersey Island								
Threemile Slough	41	45	48		30	35	46	
Oulton Point	64	42	67	a 46	47	a 44	58	37
San Andreas Landing	23	19	22	a 19	20	21	20	18
Opposite Central Landing	14		a 10	a 8		16	a 10	11
Dutch Slough	92	75	a 69	a 61	60	a 57	a 57	57
East Contra Costa Irrigation District	84		a 54	a 55	54	a 61	59	63
Clifton Court Ferry	56	57	a 60	a 65	67	a 75		93
Mossdale Bridge	232	a 232	a 173	a 182	216	a 224	a 212	186
Vernalis (g)	223	a 184	a 162	a 205	a 220	a 208	bd 180	d 193

* Samples taken at four-day intervals approximately one and one-half hours after high tide.

a Taken after low-high tide.

e Taken on preceding day.

b Taken on following day.

f Taken two days earlier.

c Taken two days later.

g Station located above tidal action.

d Taken over one hour off scheduled time.

TABLE B-39 (Continued)

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*

In parts of chloride per million parts of water

Station	December 1961							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	d 12000	d 11900	d 11100	11200	d 12200	d 12000	ad 10900	d 10800
Crockett	11100	8800	8700	9570	10600	10100	7790	9350
Benicia	8980	6570	6300	7040	7410	8130	5740	8040
Martinez	10800	6670	8890	8650	10400	7780		9020
West Suisun							2560	5660
Innisfail Ferry		d 4630	2220	2780		2610	3280	bd 990
Port Chicago	7370	3980	3800	4070	5940	4930	2410	5690
Spoonbill Creek	2460	553	324	304	582	836	430	587
Pittsburg				648				120
Sacramento River Delta								
Collinsville	1090	213	167	65	232	a 162	56	
Emmerton	137	51	a 24	32		52	30	23
Threemile Slough Bridge	58	24	21	19	20	20	16	15
Rio Vista Bridge	13	9	14	15	16	12	9	12
Isleton Bridge	12	9	14	13	14	10	7	12
San Joaquin River Delta								
Antioch	782	282	88	65	123	167	74	57
Antioch Bridge	95	42	42	37		42	a 42	31
Jersey Island								
Threemile Slough					24	23	20	21
Culton Point	35	a 20	a 24		d 22	d 26	a 21	d 24
San Andreas Landing	18	17	17	20	21	20	a 20	21
Opposite Central Landing	12		a 10	16	16		8	
Dutch Slough	60	55	46	46	41	41	43	47
East Contra Costa Irrigation District	65	79	76	83	76	a 85	87	97
Clifton Court Ferry	116	148	a 176	175	184	a 195	214	228
Mossdale Bridge	194	a 186	a 171	204	a 223	a 221	218	236
Vernalis (g)	a 185	a 174	a 183	211	a 232	211	222	236
Station	January 1962							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	d 12700	d 12800	d 13300	12800	12700	12300	10900	11200
Crockett	11200	12000	11000	11000	11400	9220		9200
Benicia	9120	9820	8610	8040	9390	7020	6730	8140
Martinez	10600	9610	8300	a 7610		8590	a 6200	9510
West Suisun	7100	7040	5660	6460		5160	3800	
Innisfail Ferry	2800	3170	3380	3500	3640	d 3540	3640	3100
Port Chicago	6850				7440	3460	3190	5110
Spoonbill Creek	1570	1570	2250	1550	1490	1550	639	832
Pittsburg			ad 1030	ab 1260	1270		a 204	ad 136
Sacramento River Delta								
Collinsville	956	790	a 856	788	797	836	100	a 424
Emmerton	41	187	a 97	80	167	22	25	28
Threemile Slough Bridge	14	20	20	23	21	22	17	14
Rio Vista Bridge	13	15	12	13	14	14	8	9
Isleton Bridge	10	11	18	13	13	10	7	9
San Joaquin River Delta								
Antioch	401	643	460	370	478		119	76
Antioch Bridge	37	45	a 44	50	51	53	48	45
Jersey Island								
Threemile Slough			a 26	26			28	
Culton Point	20	24	25	28	29	31	31	25
San Andreas Landing	22	23	a 24	d 28	24	30	a 20	31
Opposite Central Landing	14	a 13	a 12		22	a 8	7	12
Dutch Slough	46	45	a 49	53	55	a 55	57	57
East Contra Costa Irrigation District	102	106	a 128	135	a 150	a 143	161	
Clifton Court Ferry	234	a 237	a 241	246	a 244	a 226	231	221
Mossdale Bridge	a 221	a 227	a 238	208	a 217	221	214	222
Vernalis (g)	238	a 237	a 246	204	a 218	ad 225	207	224

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.

a Taken after low-high tide.

e Taken on preceding day.

b Taken on following day.

f Taken two days earlier.

c Taken two days later.

g Station located above tidal action.

d Taken over one hour off scheduled time.

TABLE B-39 (Continued)
SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	February 1962							
	2	6	10	14	18	22	26	
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	12300	12500	12500	5230	2560	a 3160	3680	
Crockett		11400	10600	3180	1030	1540	1890	
Benicia	9490	8120	6800	1200	290	97	332	
Martinez	9490	11200	a 6330	1240	329	a 295	a 305	
West Suisun	4670	6700	5270	542	310	44	78	
Innisfail Ferry	2990	d 3340	3310	2520	756	436		
Port Chicago	ad 4650		5310	a 339	a 281	a 49	a 43	
Spoonbill Creek	1670	1480	1740	116	23	a 33	38	
Pittsburg	1390	1050	1320	70			53	
Sacramento River Delta								
Collinsville	729	930	901	44	51	12	14	
Emmaton	60	d 138	69	19	24	7	11	
Threemile Slough Bridge	17	a 21	17	6	5	5	8	
Rio Vista Bridge	12	13	7	6	5	8	9	
Isleton Bridge	10	10	12	6	9	6	7	
San Joaquin River Delta								
Antioch	452	441	485	55	58	a 62	56	
Antioch Bridge	53	55	a 71	54	69	a 87	86	
Jersey Island								
Threemile Slough	28	d 30		d 32	d 31	30	20	
Oulton Point	27	28	24	31	51	47	40	
San Andreas Landing	25	a 29	27	13	22	18	16	
Opposite Central Landing	15	a 10	7	9	7	10	10	
Dutch Slough	58	a 64	61	80	143	144	117	
East Contra Costa Irrigation District	165	a 177	168	222	a 211	102	76	
Clifton Court Ferry	230	a 230	221	182	a 60	33	45	
Mossdale Bridge	a 230	a 239	186	a 43	a 44	33	42	
Vernalis (g)	230	248	185	a 44	39	30	d 44	
Station	March 1962							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	8490	d 6570	a 3170	3740	6640	a 7530	a 4500	ae 8280
Crockett				bd 3600	5110			4870
Benicia	4340	d 3340	169	335	2440	2360	3060	2620
Martinez	3400	3870	a 3840	1570	4270	a 1150	a 2940	2450
West Suisun	566		94	ae 76	164		838	ae 673
Innisfail Ferry	585	473	937	ae 682		a 568	614	641
Port Chicago	868	160	a 180	44		a 141	479	531
Spoonbill Creek	30	38	30	38	36	a 36	52	43
Pittsburg	44	61	33	35	26	a 35	ad 32	25
Sacramento River Delta								
Collinsville	20	18	13	17	16	a 21	20	20
Emmaton	17	12	9	16	d 12	15	16	
Threemile Slough Bridge	15	a 14	12	10	16	12	16	11
Rio Vista Bridge	16	12	7	7	12	12	11	9
Isleton Bridge	8	8	6	7	10	12	7	7
San Joaquin River Delta								
Antioch	52	48	41	50	41	a 37	35	32
Antioch Bridge	77	74	60	50	54	a 52	57	42
Jersey Island								
Threemile Slough	36	34	28	26		a 24	23	22
Oulton Point	21	30	28	33	31		22	21
San Andreas Landing	34	27	27	22		a 21	20	21
Opposite Central Landing	12	12	8	8	12		8	9
Dutch Slough	98	83	62	77	89	73	65	54
East Contra Costa Irrigation District	103	a 93	95	87	80		88	97
Clifton Court Ferry	59	a 74	48	44	52	63	65	71
Mossdale Bridge	a 62	a 69	25	41	a 55	64	66	68
Vernalis (g)	a 61	a 65	25	ad 40	a 52	64	63	ad 64

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.

a Taken after low-high tide.

b Taken on following day.

c Taken two days later.

d Taken over one hour off scheduled time.

e Taken on preceding day.

f Taken two days earlier.

g Station located above tidal action.

TABLE B-39 (Continued)

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*

In parts of chloride per million parts of water

Station	April 1962							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	9010	a 7570	b 7270	a 10000	a 9450	a 9220	a 8490	a 8640
Crockett	6440	5100	4400	e 7090				
Benicia		2230	1690	4820	4090	4760	2700	3900
Martinez	4790	a 993	a 3520	a 5290	a 3450	a 5290	3450	a 3620
West Suisun		1190	344		1770			1610
Innisfail Ferry		a 555	508	a 568		a 554	403	
Port Chicago	a 473	466	230	1930	a 677	a 440	1050	1400
Spoonbill Creek	37	a 33	28	a 24	a 19	a 18	23	a 23
Pittsburg	24	d 31	22		17		19	a 17
Sacramento River Delta								
Collinsville	16	a 21	14	a 11	a 13		15	
Emmerton	15	15	19	a 12	ab 9		9	a 7
Threemile Slough Bridge	14	12	6	6	5	4	6	a 6
Rio Vista Bridge	10	6	6	6	5	5	5	10
Isleton Bridge	6	4	4	9	5	5	6	5
San Joaquin River Delta								
Antioch	32	a 28		a 20	a 18	18	15	a 16
Antioch Bridge	55	a 206	a 39	a 31	a 36	a 37	19	a 30
Jersey Island								
Threemile Slough	20	a 16	11		a 10		11	a 12
Oulton Point	24	16	13		10	12	8	a 9
San Andreas Landing	16	12	12	a 9	a 8		7	a 6
Opposite Central Landing	9	6	5		a 8	4	7	a 7
Dutch Slough	52	53	39	34	a 34	27	22	a 18
East Contra Costa Irrigation District	100	93	141	ab 91	100	69	47	47
Clifton Court Ferry	a 71		72	a 70	a 54	50	47	40
Mossdale Bridge		98	113	a 123	150	64	65	60
Vernalis (g)	a 62	98	109	112	137	64	d 54	56
Station	May 1962							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	a 10100	a 10700	a 9400	7750	a 11400	a 11000	a 11400	a 11400
Crockett				a 5730	8430	7270	8340	9240
Benicia	5020	5770	4330	5330	5790	6700	5150	d 7180
Martinez	a 3750	a 3700	4580	a 5690	a 2450	a 6330	a 4530	4070
West Suisun	4480	2670	2730	3710		3560		6050
Innisfail Ferry	a 444			a 414	a 381	a 384	b 410	
Port Chicago		a 1010	d 364	2090	a 1310	3140	2060	4190
Spoonbill Creek	a 20	46	a 74	a 32	a 36	46	a 73	a 244
Pittsburg		d 35	a 40	a 20		61		
Sacramento River Delta								
Collinsville	a 8	17	a 26	a 14	a 23	36	a 18	a 20
Emmerton	d 8	10	ab 12	a 7	a 7		a 13	a 16
Threemile Slough Bridge	a 7	10	b 12	6	7	9	b 11	18
Rio Vista Bridge	5	7	b 9	6	7	8	b 10	8
Isleton Bridge	7	6	b 9	11	7	8	b 9	10
San Joaquin River Delta								
Antioch	a 15	26	a 23	a 13	a 13	26	a 28	a 31
Antioch Bridge	a 21		a 30	a 25	a 13	22	a 20	a 25
Jersey Island								
Threemile Slough	a 9		a 11	a 9	a 11	12	a 13	a 12
Oulton Point	10		ab 11	a 10		11	a 13	
San Andreas Landing	a 8	10	a 12	a 11	a 10	12	a 11	a 10
Opposite Central Landing	a 8	d 11		a 9		8	a 15	a 9
Dutch Slough	a 19	18	a 16	a 16	16	17	a 20	a 21
East Contra Costa Irrigation District	41	34	a 31	a 38	38	38	b 60	a 41
Clifton Court Ferry	41	39	a 38	32	36	38	a 41	a 41
Mossdale Bridge	68	56	a 64	32	66	94	a 85	89
Vernalis (g)	64	53	a 54	33	d 66	82	a 82	95

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.

a Taken after low-high tide.

e Taken on preceding day.

b Taken on following day.

f Taken two days earlier.

c Taken two days later.

g Station located above tidal action.

d Taken over one hour off scheduled time.

TABLE B-39 (Continued)
SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS^a
In parts of chloride per million parts of water

Station	June 1962							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	a 11200	a 10500	e 11500	a 12600	a 12000	a 12900		12800
Crockett	9090		e 8230	9370	10100		e 10300	12000
Benicia	6710	e 560	e 5250	7610	8350	9280	e 7510	8750
Martinez	a 3340	a 2590	e 7030	a 5810	a 5700	a 9440	e 10300	a 4580
West Suisun	5720		e 3710	5500	7360	7170	e 7740	8750
Innisfail Ferry	a 445	562	e 548		a 689	1130		a 1170
Port Chicago	bd 1060		ad 1750	e 5890	4880	d 3740	e 5640	e 6120
Spoonbill Creek	a 327	194	a 175	a 290	a 329	389	a 608	a 1140
Pittsburg		127	a 72	a 99	a 132	204		a 360
Sacramento River Delta								
Collinsville	a 21	56	a 40	a 34	181	311	92	
Emmerton	23	30	a 15	a 11	a 25	61	a 80	
Threemile Slough Bridge	a 11	10	a 10	a 8	9	16	15	26
Rio Vista Bridge	10	9	11	9	8	15	13	10
Isleton Bridge	11	7	10	11	7	14	10	10
San Joaquin River Delta								
Antioch	a 32	53	a 38	a 23	a 59	123	a 208	a 112
Antioch Bridge	26	a 31	a 23		a 28	35		a 36
Jersey Island								
Threemile Slough				a 15	a 13	18		a 15
Oulton Point	a 12	11	ab 12	a 12	15	16	a 16	a 15
San Andreas Landing	11	11	a 8		12	16	a 14	a 15
Opposite Central Landing	a 9	7	a 8	a 7		11	a 15	
Dutch Slough	d 21	19	a 18	a 19	21	23	a 12	a 21
East Contra Costa Irrigation District	44	52	a 41	45	44	40	47	30
Clifton Court Ferry	45	41	a 40	35	41	47	a 49	45
Mossdale Bridge	128	19	a 23	18	45	47	a 61	114
Vernalis (g)	124	17	22	21	43	47	59	111
July 1962								
Station	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	a 13300	a 13300	e 13300	a 14100		14000	e 14000	a 14300
Crockett							e 13600	
Benicia	9380		e 8960	10000	12300	9490	e 10500	
Martinez	a 9150	8620	e 9480	6730	a 8300	8850	e 11900	a 11000
West Suisun								
Innisfail Ferry		1610	a 1400	a 1740		3250	a 2780	a 3080
Port Chicago	5580	5760	3942		9370	6480	e 8030	9370
Spoonbill Creek	a 1150	1400	a 1560	a 2070	a 3380	2800	a 3080	a 3540
Pittsburg		d 710	a 909	a 986	a 1820	ab 2350	a 1820	a 1920
Sacramento River Delta								
Collinsville	a 534	805	a 708		a 1940	a 2030	a 1710	a 2000
Emmerton	a 62	d 119	a 98	a 113	b 492	389	a 268	a 425
Threemile Slough Bridge	25	23	19	27	187	65	175	121
Rio Vista Bridge		10	10	10	12	52	11	24
Isleton Bridge	10	10	a 9	10	11	17	11	10
San Joaquin River Delta								
Antioch	a 186	397	a 249	a 375	a 742	a 1050	a 739	a 975
Antioch Bridge	a 45	d 83	a 76	a 105	a 358	a 280	d 333	a 364
Jersey Island								
Threemile Slough	a 14	25	a 24	a 34	a 40			
Oulton Point	25	25	abd 17	a 28	83	a 63	ab 64	a 82
San Andreas Landing	12	d 14	a 11	a 12	16	a 20	a 12	a 22
Opposite Central Landing	a 11	11	a 10	a 10		a 10	a 10	a 10
Dutch Slough	24	27	a 28	a 36	87	a 106	a 117	a 192
East Contra Costa Irrigation District	27	28	25	26	25	a 26	34	42
Clifton Court Ferry	33	36	a 30	28	23	a 24	a 24	23
Mossdale Bridge	124	160	a 188	250	165	a 198	a 236	230
Vernalis (g)	142	166	170	160	184	192	210	201

- * Samples taken at four-day intervals approximately one and one-half hours after high high tide.
a Taken after low-high tide. e Taken on preceding day.
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c Taken two days later. g Station located above tidal action.
d Taken over one hour off scheduled time.

TABLE B-39 (Continued)
SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	August 1962							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	a 14300	14600	e 14400	a 14300	a 14300		a 14300	15500
Crockett	13000	12400	e 11800	12700	12500	13200	11600	13200
Benicia	11400	10200	e 10800	11200	10500	11600	11200	10800
Martinez	a 11600	12400	e 9650	7980	a 9690	9580		a 10500
West Suisun		9770	e 9020	11100	8290	11000	9360	a 10500
Innisfail Ferry		a 3560	a 3270	ab 3690	a 4040		a 4040	
Port Chicago	8860	7690	e 8140	9080	8600	8670		
Spoonbill Creek	3130	2970	a 3100	a 3120	2910	a 2980	a 3080	a 2690
Pittsburg		ad 1600	a 1690	a 1310		d 1600	ab 1370	a 1100
Sacramento River Delta								
Collinsville	2430	a 1690	a 1350			a 1560	a 1820	
Emmerton	622	a 456	ac 206	a 163	335	a 204	a 114	353
Threemile Slough Bridge	124	71	a 58	a 91	67		101	114
Rio Vista Bridge	12	11	10	20	13	b 10	12	12
Isleton Bridge	10	12	10	a 11	10	b 9		11
San Joaquin River Delta								
Antioch	1630	a 1060	a 664	a 683	1380	a 851	a 803	1180
Antioch Bridge	a 479	369	a 303		a 365	a 325	a 442	a 436
Jersey Island								
Threemile Slough	111	a 88	a 58	a 62	93	a 77	a 130	a 107
Oulton Point	121	a 79	a 52	114	77	ab 73	a 116	150
San Andreas Landing	26	a 24	a 22	a 20	35	a 18	a 43	
Opposite Central Landing	12		a 11	12	10	a 15	a 22	20
Dutch Slough	181	ad 163	a 149	a 138	123	ad 124	a 183	183
East Contra Costa Irrigation District	47	ad 159	58	62	63	a 66	69	77
Clifton Court Ferry			a 29	31	32	a 30	29	32
Mossdale Bridge	231	a 210	a 193	188	212	a 202	209	190
Vernalis (g)	208	171	186	188	208	184	167	183
Station	September 1962							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	15600	15500	a 14900	a 14500	14400	a 14100	a 13500	13100
Crockett	11900	11400	e 12200	12500	12700	e 10200	11000	a 9930
Benicia	d 8980	10600	e 11500	9150	9080	e 8400	8490	7120
Martinez	10900	ad 7920	a 9770			e 9960	10800	8620
West Suisun	8170	8640	9210	6890	8680	e 6570	6890	5230
Innisfail Ferry	4720	a 4530	a 4340		3550	e 3400		
Port Chicago	6000	7920	6600		6420	bd 5380	6600	3240
Spoonbill Creek	2640	a 2260	a 2450	a 1890	a 1790	a 1180	a 1200	1030
Pittsburg		a 1230	a 590		a 849	a 613	a 476	ab 487
Sacramento River Delta								
Collinsville	1400	a 792	a 745	a 637	a 660	a 401	a 444	328
Emmerton	abd 86	a 75	a 85	a 98	a 151	a 56	a 111	105
Threemile Slough Bridge	111	42	38	75	51	34	42	a 27
Rio Vista Bridge	10	14	13	15	14	17	13	8
Isleton Bridge	12	18	16	16	14	11	12	8
San Joaquin River Delta								
Antioch	635	a 613	a 542	ad 519	a 377	a 218	a 396	287
Antioch Bridge	363	316	a 274	a 244	a 189	a 132	ad 113	79
Jersey Island						a 80	n 64	57
Threemile Slough	a 125	ad 122	a 112	a 94	a 71	a 50	a 37	27
Oulton Point	a 125	ad 104		103	a 75		ac 27	a 26
San Andreas Landing	a 42	a 51	a 57	47	a 35	a 16	a 21	19
Opposite Central Landing	a 27	a 22		17	a 18		10	a 10
Dutch Slough	a 173	a 165	ad 186	172	a 142	a 108	a 84	a 73
East Contra Costa Irrigation District	ab 73	a 78	a 85	a 92	a 90	a 89	92	a 84
Clifton Court Ferry	a 32	a 39	a 39	46	a 51	a 53	55	a 55
Mossdale Bridge	a 183	a 181	151	190	a 174	a 161	160	a 150
Vernalis (g)	158	172	149	198		151	169	154

- * Samples taken at four-day intervals approximately one and one-half hours after high high tide.
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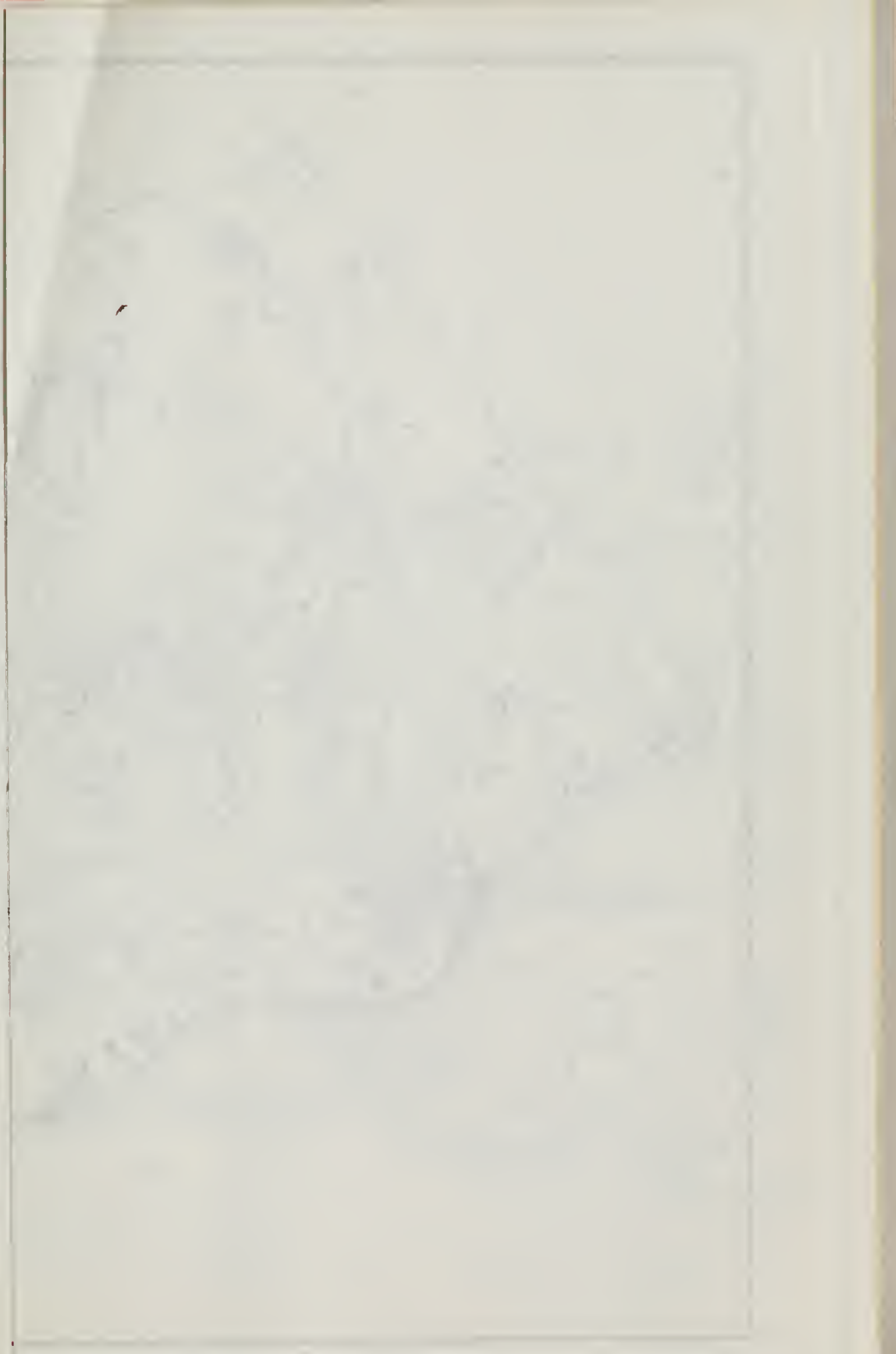


TABLE B-39 (Continued)
SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	August 1962							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	a 14300	14600	e 14400	a 14300	a 14300		a 14300	15500
Crockett	13000	12400	e 11800	12700	12500	13200	11600	13200
Benicia	11400	10200	e 10800	11200	10500	11600	11200	10800
Martinez	a 11600	12400	e 9650	9780	a 9690	9580		a 10500
West Suisun		9770	e 9020	11100	8290	11000	9360	8100
Innisfail Ferry		a 3560	a 3270	ab 3690	a 4040		a 4040	
Port Chicago	8860	7690	e 8140	9080	8600	8670		
Spoonbill Creek	3130	2970	a 3100	a 3120	2910	a 2980	a 3080	a 2690
Pittsburg		ad 1600	a 1690	a 1310		d 1600	ab 1370	a 1100
Sacramento River Delta								
Collinsville	2430	a 1690	a 1350			a 1560	a 1820	
Emmaton	622	a 456	ac 206	a 163	335	a 204	a 114	353
Threemile Slough Bridge	124	71	a 58	a 91	67		101	114
Rio Vista Bridge	12	11	10	20	13	b 10	12	12
Isleton Bridge	10	12	10	a 11	10	b 9		11
San Joaquin River Delta								
Antioch	1630	a 1060	a 664	a 683	1380	a 851	a 803	1180
Antioch Bridge	a 479	369	a 303		a 365	a 325	a 442	a 436
Jersey Island								
Threemile Slough	111	a 88	a 58	a 62	93	a 77	a 130	a 107
Oulton Point	121	a 79	a 52	114	77	ab 73	a 116	150
San Andreas Landing	26	a 24	a 22	a 20	35	a 18	a 43	
Opposite Central Landing	12		a 11	12	10	a 15	a 22	20
Dutch Slough	181	ad 163	a 149	a 138	123	ad 124	a 124	183
East Contra Costa Irrigation District	47	ad 159	58	62	63	a 66	69	77
Clifton Court Ferry			a 29	31	32	a 30	29	32
Mossdale Bridge	231	a 210	a 193	188	212	a 202	209	190
Vernalis (g)	208	171	186	188	208	184	167	183
Station	September 1962							
	2	6	10	14	18	22	26	30
San Francisco, San Pablo, and Suisun Bays								
Sobrante Beach	15600	15500	a 14900	a 14500	14400	a 14100	a 13500	13100
Crockett	11900	11400	e 12200	12500	12700	e 10200	11000	a 9930
Benicia	d 8980	10600	e 11500	9150	9080	e 8400	8490	7120
Martinez	10900	ad 7920	a 9770			e 9960	10800	8620
West Suisun	8170	8640	9210	6890	8680	e 6570	6890	5230
Innisfail Ferry	4720	a 4530	a 4340		3550	e 3400		
Port Chicago	6000	7920	6600		6420	bd 5380	6600	3240
Spoonbill Creek	2640	a 2260	a 2450	a 1890	a 1790	a 1180	a 1200	1030
Pittsburg		a 1230	a 590		a 849	a 613	a 476	ab 487
Sacramento River Delta								
Collinsville	1400	a 792	a 745	a 637	a 660	a 401	a 444	328
Emmaton	abd 86	a 75	a 85	a 98	a 151	a 56	a 111	105
Threemile Slough Bridge	111	42	38	75	a 51	34	42	a 27
Rio Vista Bridge	10	14	13	15	14	17	13	8
Isleton Bridge	12	18	16	16	14	11	12	8
San Joaquin River Delta								
Antioch	635	a 613	a 542	ad 519	a 377	a 218	a 396	287
Antioch Bridge	363	316	a 274	a 244	a 189	a 132	ad 113	79
Jersey Island						a 80	a d4	57
Threemile Slough	a 125	ad 122	a 112	a 94	a 71	a 50	a 37	27
Oulton Point	a 125	ad 104		103	a 75		ac 27	a 26
San Andreas Landing	a 42	a 51	a 57	47	a 35	a 16	a 21	19
Opposite Central Landing	a 27	a 22		17	a 18		10	a 10
Dutch Slough	a 173	a 165	ad 186	172	a 142	a 108	a 84	a 73
East Contra Costa Irrigation District	ab 73	a 78	a 85	a 92	a 90	a 89	92	a 84
Clifton Court Ferry	a 32	a 39	a 39	46	a 51	a 53	55	a 55
Mossdale Bridge	a 183	a 181	151	190	a 174	a 161	160	a 150
Vernalis (g)	158	172	149	158		151	169	154

- * Samples taken at four-day intervals approximately one and one-half hours after high high tide.
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SALINITY OBSERVATION STATIONS

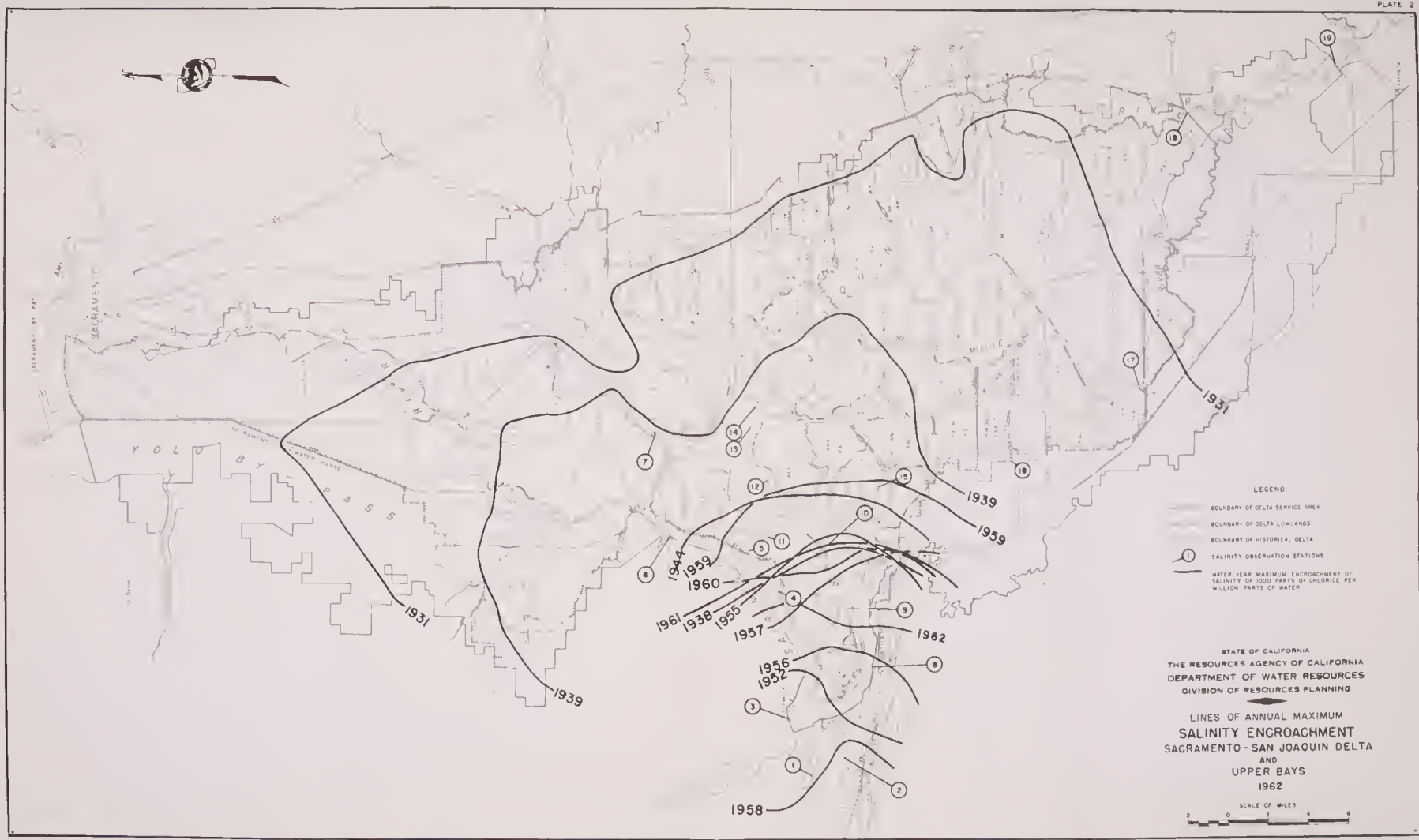
Stations shown on map

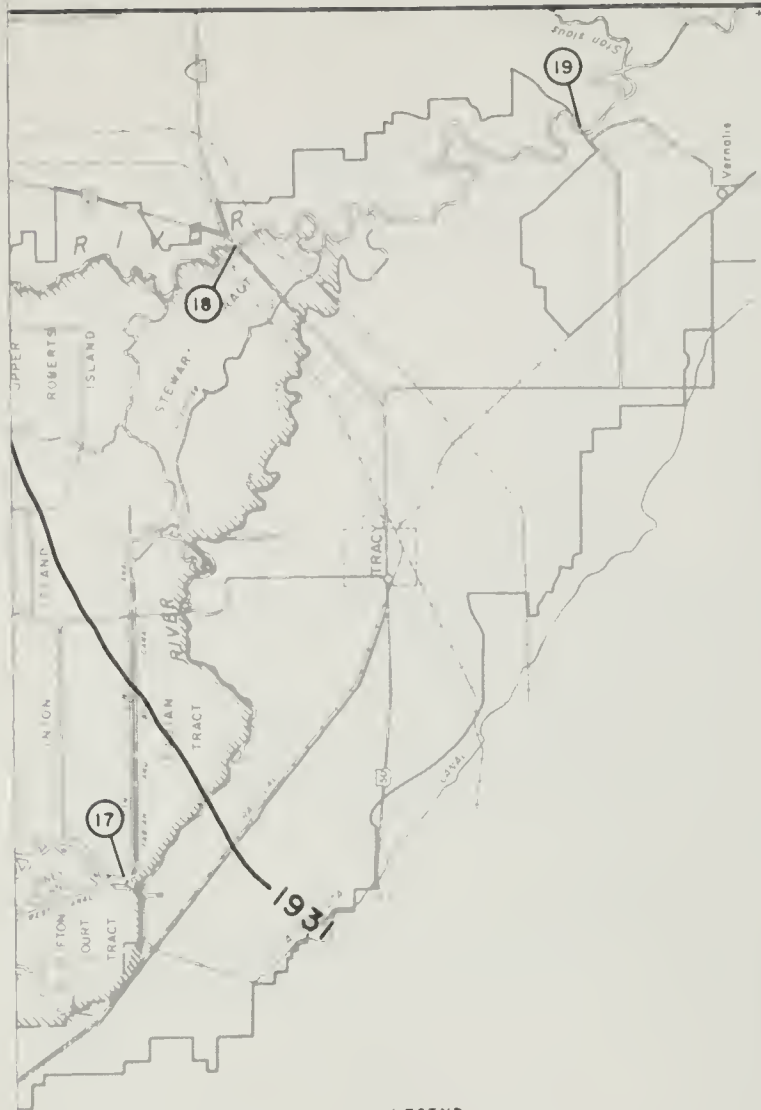
1. Spoonbill Creek
2. Pittsburg
3. Colimaarte
4. Emulsion
5. Tuleville Slough Bridge
6. Rio Vista Bridge
7. Isleton Br. dge
8. Antioch
9. Antioch Br. dge
10. Jersey Island
11. Tuleville Slough
12. Suisun Point
13. San Andreas Landing
14. Opposite Central Landing
15. Dutch Slough
16. East Contra Costa Highway Br.
17. Clifton Coast Ferry
18. Mossdale Bridge
19. Venetia

Stations off map

20. Coprate Beach
21. Rockett
22. Benicia
23. Martinez
24. West Suisun
25. Benicia Ferry
26. Port Chicago

Note: For description of station location, see Appendix B





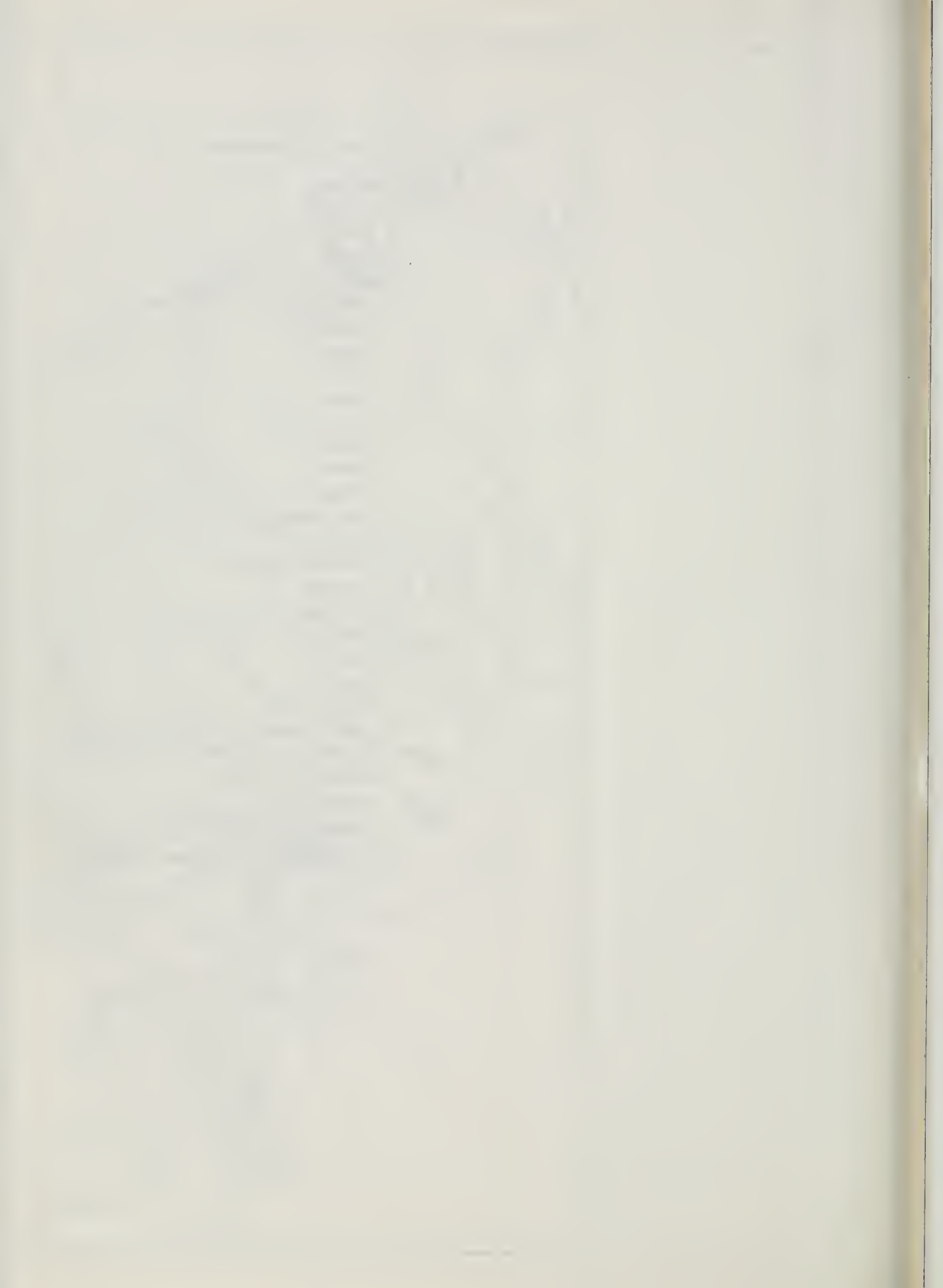
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- ① SALINITY OBSERVATION STATIONS
- 1931
- WATER YEAR MAXIMUM ENCROACHMENT OF SALINITY OF 1000 PARTS OF CHLORIDE PER MILLION PARTS OF WATER

STATE OF CALIFORNIA
THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
DIVISION OF RESOURCES PLANNING

—◆—
LINES OF ANNUAL MAXIMUM
SALINITY ENCROACHMENT
SACRAMENTO - SAN JOAQUIN DELTA
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